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CONTAGIOUS EQUINE METRITIS, A NEW DISEASE OF HORSES

The following article is taken from the APHIS Facts About...dated October 1977:

CEM (contagious equine metritis) is a newly discovered venereal disease of horses. It has been found in France, Great Britain, Ireland and Australia.

The present name of this venereal disease is contagious equine metritis (CEM). Information indicates this condition is a venereal disease caused by a bacteria which produces serious economical losses in throughbred breeding establishments. To this point, CEM has only been reported in thoroughbreds.

Full information on the extent of CEM in France has not yet been received, but the disease is believed to have been in that country as early as 1975. It apparently spread to Ireland and caused an outbreak during the breeding season of 1976 in 10 stud farms. It spread to the Newmarket area of England and appeared during the breeding season of 1977. The disease was reported to have affected three stud farms in Ireland (in 1977) and 17 among 40 stud farms in Newmarket, England. The Newmarket losses were estimated to be approximately \$30 million. Among the mares covered in the affected stud farms in Newmarket, 30 percent were said to have shown clinical signs of the disease.

The primary clinical manifestations in mares are:

1. A copious, purulent vaginal discharge occurring 305 days after mares have been covered. Many mares return to estrus due to lack of conception. Some mares have early abortions. It is believed a few infected mares can carry foals to term.
2. The disease can be transmitted when infected stallions breed mares, or contaminated instruments are used to examine the genital tract of mares, or by other means such as washing the genital area of infected mares and non-infected mares using the same water and sponge.

The causative agent of CEM appears to be a microaerophilic gram-negative coccobacillus that is similar to, but not identical with, moraxella, brucella, and hemophilus organisms. The Collindale Typing Center in England made the foregoing determination.

The role of the stallion in CEM is not clearly defined. It is believed that the stallion is more than a mechanical transmitter of this disease. Limited work has shown the following:

Experimentally, Transmission of CEM seems to be enhanced in the presence of stallion semen. Limited work relating to necropsies of stallions has not shown gross pathological changes.

Chemotherapy against the causative agent of CEM has involved numerous drugs, but ampicillin and other penicillin derivatives seem to be most practical. Controlled work directed at defining chemotherapeutic success needs to be carried out.

#### NO CANCER RISK FOUND IN CATTLE GROWTH HORMONE

Excerpt from the July 1977 Oregon Animal Health News:

A team appointed by the Council for Agricultural Science and Technology, a group of 19 agricultural science societies, has found no evidence of a cancer risk to human beings resulting from the use of the controversial hormone, DES, which is used as a growth-promoting agent in cattle. The 20-member team warned that "it is beyond the capability of science to prove that anything is completely safe and without hazard," but asserted that "there is no evidence of a cancer hazard attributable to use of hormonally active substances in livestock production." DES, they stated, offers substantial economic benefits to farmers and consumers and enough savings in feed to alleviate much of the malnutrition in underdeveloped nations. The findings of the study will be submitted to the FDA, which banned the use of DES in livestock feed in 1972 and 1973. While this order was overturned by a court ruling, the FDA has announced its intention to seek another ban on the substance.

#### BREAKTHROUGH IN RABIES TREATMENT REPORTED

In the June 1977 CDC Veterinary Public Health Notes the following article appeared:

According to World Health, May 1977, published by the World Health Organization, a simplified new treatment for rabies has been tested at WHO Collaborating Center for Reference and Research in Rabies, Teheran, Iran, and has proved highly effective.

Forty-five persons who had been bitten by rabid dogs or wolves were successfully treated. Six dogs and 2 wolves were involved in the biting episodes. Six months after being treated all but 1 patient were reported well; a 90-year-old man had died of a heart attack after a hard day's work 5 months after completing his treatment for rabies.

The new treatment consists of 4 inoculations of human diploid cell vaccine followed by 2 booster doses. One injection of immune serum is given with the first dose of vaccine. The classic vaccines now in use are given in a series of 14 to 21 injections followed by 2 booster doses; sometimes they produce severe side effects, which are caused by foreign proteins in the animal tissues used in the vaccine. The new human diploid cell vaccine is a big step forward as it is made from a human diploid cell culture which has a low protein content and elicits high antibody response to the rabies virus.

In another trial of the vaccine conducted at the Institute of Medical

Virology and Immunology, University of Essen, Federal Republic of Germany, 108 persons received the vaccine as a preventive measure. Forty-four persons in the group were later bitten by rabid animals; none contracted rabies.

#### STUDY OF INTRADERMAL PSEUDORABIES TEST

Interest may increase in the use of pseudorabies test procedures in Montana what with the three recently diagnosed PR herds in this state.

The following item was taken from the Oregon Animal Health News, edited by Dr. Guy Reynolds, Extension Veterinarian, Corvallis, Oregon. It reads:

One of the major problems with pseudorabies control is identification of latent carrier animals which may spread the disease to uninfected swine. A simple field test to identify chronic PRV infection and eliminate infected animals would be a useful tool for the practitioner.

Currently, such a test is being researched at NADC. The test PR antigen has been tested by intradermal injection in three locations: dorso-lateral aspect of the thorax, tip of ear and lower eyelid. Positive response to the antigen is a swollen edematous mass at the injection site. It was most obvious at the eye and thorax locations. Maximum response was reached in 48 hours.

Response to the antigen may be positive as early as seven days post infection, but may be very mild. By day 14, the reaction was prominent and was near maximum 28 days after infection. Pigs which were three months post infection had a positive reaction.

This research may lead to a simple field test for PR which can be administered by the practicing veterinarian. Before use, it must be field-tested with natural outbreaks.

#### WASHINGTON STATE UNIVERSITY ANNUAL SPRING CONFERENCE

Dr. R. L. Ott, Washington State University asked that the following notification be placed in the Monthly Letter:

April 20-22, 1978. Annual Spring Conference For Veterinarians, Washington State University; combined this year with the official dedication of the new Veterinary Science Building. Contact Barbara Robbins, College of Veterinary Medicine, 6 Wegner Hall, Pullman, Washington 99164, (509) 335-6131.

#### MYCOBACTERIUM BOVIS PPD TUBERCULIN

You now have in your possession or have available from us the new PPD tuberculin for Tb testing. This replaces the old Heat-Concentrated Synthetic Medium. The following gives you some information on PPD history, the care and use of the product, and some advantages for PPD tuberculin.

##### History And Development

Since 1938 USDA contract tuberculin has been a Heat-Concentrated Syn-

thetic Medium (HCSM) old tuberculin made from three strains of the human tubercle bacilli Mycobacterium tuberculosis (M. tuberculosis). Since 1942 England has been using a purified protein derivative (PPD) of M. tuberculosis in which proteins of the culture filtrate are precipitated by trichloroacetic acid. In 1950 work in the Netherlands showed that Mycobacterium bovis (M. bovis) PPD tuberculin is at least as potent as M. tuberculosis tuberculin in detecting bovine tuberculosis and considerably more specific. All countries of the European Economic Community use a trichloroacetic acid (TCA) PPD tuberculin of M. bovis derivation for official tests.

Field trials with M. bovis PPD tuberculin were conducted in the United States in the early 1970's. Results from this study were in agreement with those of other workers that PPD tuberculin gave fewer false positive animals resulting from non-specific sensitivity. In addition, it was found that ammonium sulfate (AS) precipitated PPD was even more specific (fewer suspects) than the trichloroacetic acid precipitated PPD used in Europe. Therefore, effective October 1, 1977, all field testing of cattle for tuberculosis in the United States will be with this AS precipitated PPD tuberculin labeled "Tuberculin PPD-Bovis Intradermic."

#### Product Care

Because prolonged exposure to light can cause loss of potency the new PPD tuberculin is supplied in amber bottles. This does not, however, negate the need to protect the tuberculin from prolonged exposure to light nor the need to protect it from extremes of temperature. This tuberculin should be refrigerated at all times except when in actual use.

#### Advantages and Dosage

Some of the advantages of PPD tuberculin are:

1. Longer refrigerated shelf life.
2. Fewer suspects - therefore, it is even more imperative that any and all responding animals be reported as suspects and retested by the comparative-cervical test or branded as reactors.
3. They closely approximate the tuberculin used by the European countries. Export testing will therefore, correlate better with the testing results in the importing country.
4. We now have a product of exactly 1 mg of protein per ml of tuberculin which can be identical from batch to batch, thereby affording a more uniform product.
5. The standard test dose continues to be 0.1 cc in the caudal fold as it was with HCSM old tuberculin.

#### OKLAHOMA REPORTS THIRD CASE OF RABIES IN PET SKUNK

The CDC Veterinary Public Health Notes published the following article in their August 1977 issue:

On July 22, 1977, the Oklahoma State Health Department Laboratory confirmed rabies in another pet skunk. This is the third case of rabies in pet skunks in a 5-week period in Oklahoma (VPH Notes, July 1977). In this latest case, the pet exposed 27 persons.

Because the skunk had been "immunized against rabies" and decented, the owner thought he and his family were protected. When a veterinarian in McIntosh County examined the sick skunk, he immediately suspected rabies, and his diagnosis was confirmed by the state health department.

Epidemiologic investigation revealed that the skunk had been purchased at a "trade day" in Canton, Texas, and that the sale of pet skunks was not an uncommon practice at this monthly event.

Source: Oklahoma Communicable Disease Bulletin, for week ending July 23, 1977.

Editorial Note: There is no vaccine licensed for vaccination of wildlife, including skunks. An increasing number of states are passing legislation against owning wild animals for both humane and health reasons.

The National Academy of Sciences' 1973 publication "Control of Rabies" states that people should be discouraged from keeping foxes, skunks, raccoons, bobcats, ocelots, monkeys, or other wild animals as pets. There are a number of reasons for this recommendation. In many cases the owners tire of the extra care required to maintain these wild animals and either release them into a foreign environment or maintain them in a inhumane manner. In addition, rabies has occurred in numerous wildlife that were captured in the wild and sold as pets.

The publication "Control of Rabies" recommends that if persons insist on keeping wild animals as pets, these animals should be quarantined for a minimum of 180 days if captured in the wild, and vaccinated with a suitable rabies vaccine at least 30 days prior to their release to the owner. Annual vaccination is recommended unless the animal is maintained in complete isolation from known animal vectors of rabies. Only inactivated vaccines should be used for these animals, since the modified live virus (MLV) vaccines will occasionally cause clinical rabies in wildlife species.

#### NEW DEPUTY STATE VETERINARIANS

The following Deputy State Veterinarians have been appointed:

JOHN N. BLACK, D.V.M.....Choteau  
ROBERT R. BRUNER, D.V.M.....Harlowton  
LESTER L. PANNETIER, D.V.M.....Havre  
RONALD E. SKINNER, D.V.M.....Salmon, Idaho

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BEST WISHES FOR THE HOLIDAYS

AND HAPPINESS THROUGHOUT THE NEW YEAR

Animal Health Division &  
Diagnostic Laboratory Bureau  
Staffs

\*\*\*\*\*

## OPEN HOUSE

YOU ARE CORDIALLY INVITED TO AN OPEN HOUSE AT THE HADLEIGH MARSH LABORATORIES, TUESDAY, JANUARY 31ST, WEDNESDAY, FEBRUARY 1ST, AND THURSDAY, FEBRUARY 2ND, 1978 FROM ONE TO FIVE P.M.

HADLEIGH MARSH LABORATORY HOUSES THE MONTANA STATE UNIVERSITY VETERINARY RESEARCH LABORATORY AND THE DEPARTMENT OF LIVESTOCK, VETERINARY DIAGNOSTIC LABORATORY.

CONDUCTED TOURS OF THE FACILITY WILL HELP ACQUAINT LIVESTOCK PRODUCERS AND OTHER INTERESTED INDIVIDUALS WITH THE ROLE EACH LABORATORY PLAYS IN THE LIVESTOCK INDUSTRY OF MONTANA. EVERYONE IS INVITED. LIVESTOCK PRODUCERS SHOULD FIND THE TOUR ESPECIALLY INFORMATIVE AND INTERESTING.

HADLEIGH MARSH LABORATORY IS LOCATED ON SOUTH 19TH STREET, ABOUT ONE-HALF MILE WEST OF THE M.S.U. FIELD HOUSE. REFRESHMENTS WILL BE SERVED.



# SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR AUGUST 1977

Accessions handled by the Diagnostic Laboratory by specimen for the month of August 1977 are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	79
Equine.....	66
Porcine.....	13
Ovine.....	12
Feline.....	23
Canine.....	47
Avian.....	17
Wildlife.....	86
Other.....	28
TOTAL.....	371

This compares with 297 accessions handled during the same period of 1976.

Nineteen specimens were processed involving possible human exposure to rabies. Two (skunks) were positive for rabies virus by FA and mouse inoculation procedures. Seventeen were negative.

Sixty-nine specimens were examined for rabies, in which no human exposure was involved. Six of these were positive, sixty-three, negative.

## AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Bat.....	31
Big Horn Sheep.....	1
Cat.....	14
Cattle.....	4
Chicken.....	8
Dog.....	6
Fox.....	1
Horse.....	1
Mouse.....	5
Pack Rat.....	1
Parakeet.....	2
Pigeon.....	1
Rabbit.....	1
Sheep.....	4
Skunk.....	18
Squirrel.....	2
Swine.....	7
Turkey.....	1
TOTAL AUTOPSIES PERFORMED.....	108

SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Cattle..	6	99	3	108
Bluetongue CF.....	Cattle..		99		99
" ".....	Sheep..		478	4	482
Bovine Virus Diarrhea (BVD) CF.....	Cattle..		33		33
Brucella abortus agglutination.....	Bison..		6		6
" " ".....	Canine..		5		5
" " ".....	Cattle..	74	18,607	85	18,766
" " ".....	Cattle..		3		3
" " ".....	Goat...		7		7
" " ".....	Horse...		2		2
" " ".....	Sheep..		484		484
" " ".....	Skunk...		1		1
" " ".....	Swine...		272		272
Brucellosis Ring Test.....	Cream...		285		285
*Equine Infectious Anemia (AGID).....	Horse...		706		706
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle..		26		26
Leptospira autumnalis MA.....	Canine..		3		3
" " ".....	Cattle..		110		110
" " ".....	Horse...	1	1		2
" " ".....	Human...		2		2
" " ".....	Skunk...		1		1
" " ".....	Swine...	1	12		13
Leptospira canicola MA.....	Canine..		3		3
" " ".....	Cattle..		110		110
" " ".....	Horse...		2		2
" " ".....	Human...		2		2
" " ".....	Skunk...		1		1
" " ".....	Swine...		13		13
Leptospira grippotyphosa MA.....	Canine..		3		3
" " ".....	Cattle..		110		110
" " ".....	Horse...		2		2
" " ".....	Human...		2		2
" " ".....	Skunk...		1		1
" " ".....	Swine...		13		13

SEROLOGY REPORT - (Continued)

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TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira hardjo</u> MA.....	Canine...		3		3
" " ".....	Cattle...	7	103		110
" " ".....	Horse...		2		2
" " ".....	Human...		2		2
" " ".....	Skunk...		1		1
" " ".....	Swine...		13		13
<u>Leptospira Icterohemorrhagia</u> MA.....	Canine...		3		3
" " ".....	Cattle...	2	106		108
" " ".....	Horse...	1	1		2
" " ".....	Human...		2		2
" " ".....	Skunk...		1		1
" " ".....	Swine...	2	11		13
<u>Leptospira pomona</u> MA.....	Canine...		3		3
" " ".....	Cattle...	12	98		110
" " ".....	Horse...		2		2
" " ".....	Human...		2		2
" " ".....	Sheep...		484		484
" " ".....	Skunk...		1		1
" " ".....	Swine...		13		13
<u>Leptospira tarassovi</u> MA.....	Canine...		3		3
" " ".....	Cattle...		110		110
" " ".....	Horse...		2		2
" " ".....	Human...		2		2
" " ".....	Skunk...		1		1
" " ".....	Swine...		13		13
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle...	3	7		10
Pseudorabies.....	Swine...	41	211		252
TOTAL SEROLOGICAL TESTS.....		160	22704	92	22946

\* Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

# SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR SEPTEMBER 1977

The total number of accessions handled during September 1977 by species are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	116
Equine.....	54
Porcine.....	18
Ovine.....	3
Feline.....	27
Canine.....	30
Avian.....	5
Wildlife.....	70
Other.....	<u>17</u>
TOTAL.....	340

This compares with 244 accessions handled in September 1976. This total includes thirty-two sera processed serologically for Rhinopneumonitis and Western Equine Encephalomyelitis.

In September we processed sixteen human exposure rabies specimens. One, a dog was found positive.

Seventy-five non-human exposure specimens were processed. Six of these, all skunks were positive.

On September 15 and 16, the Veterinary Research Laboratory and the Diagnostic Laboratory cooperatively sponsored the first Continuing Education Symposium. The Symposium dealt with Bovine Respiratory Disease Complex and was considered very successfull. About 50 practicing veterinarians attended in addition to VRL and Diagnostic Laboratory staff members. Comments following the symposium were almost unanimous that it was a good, fruitful session. As a result of this first symposium we now have a few dollars in the Continuing Education fund to get started on another symposium, and also many suggestions for topics. Both departments want to thank those practitioners who supported our first effort. It might be difficult to top our first effort, but we will hopefully equal it with our second symposium. Thanks for the encouragement.

AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Badger.....	1
Bat.....	38
Bear: Grizzly.....	1
Cat.....	10
Cattle.....	6
Chicken.....	2
Deer.....	2
Dog.....	4
Falcon.....	1
Fetus:	
Equine.....	1
Porcine.....	3
Mouse.....	1
Pack Rat.....	1
Parakeet.....	3
Raccoon.....	4
Sheep.....	2
Skunk.....	11
Squirrel.....	3
Swine.....	7
Turkey.....	1
Weasel.....	1
<u>TOTAL AUTOPSIES PERFORMED.....</u>	<u>103</u>

SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	UNDETERMINED	TOTAL
Anaplasma CF.....	Bison		1			1
" ".....	Cattle.	3	110			113
Bluetongue CF.....	Cattle.		190	4		194
" ".....	Goat..		3	1		4
Bovine Virus Diarrhea (BVD) CF.....	Cattle.		8		8	16
Brucella abortus agglutination.....	Bison..		2			2
" " " (card-field & market).....	Cattle.	109	18,997	74		19,180
" " " ".....	" "		337			337
" " " ".....	Goat..	2	78	1		81
" " " ".....	Horse..	1	4			5
" " " ".....	Swine..		151	1		152
" " " (card-field & market).....	" "		89			89
Brucellosis Ring Test.....	Cream..		29			29
*Equine Infectious Anemia (AGID).....	Horse..		1,290			1,290
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle.	1	9		6	16
Leptospira autumnalis MA.....	Cattle.	3	120		5	128
" " " ".....	Horse..	1				1
" " " ".....	Human..		1			1
" " " ".....	Swine..	4	19	10		33
Leptospira canicola MA.....	Cattle.	1	122		5	128
" " " ".....	Horse..		1			1
" " " ".....	Human..		1			1
" " " ".....	Swine..		22		11	33
Leptospira grippotyphosa MA.....	Cattle.	6	117		5	128
" " " ".....	Horse..		1			1
" " " ".....	Human..		1			1
" " " ".....	Swine..	1	21		11	33
Leptospira hardjo MA.....	Cattle.	51	72		5	128
" " " ".....	Horse..		1			1
" " " ".....	Human..		1			1
" " " ".....	Swine..	1	21		11	33
Leptospira icterohemorrhagia MA.....	Cattle.	5	118		5	128
" " " ".....	Horse..	1				1
" " " ".....	Human..		1			1
" " " ".....	Swine..	8	20		5	33

## SEROLOGY REPORT - (Continued)

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TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	UNDETERMINED	TOTAL
<u>Leptospira pomona</u> MA.....	Cattle..	7	116		5	128
" " ".....	Horse..	1				1
" " ".....	Human..		1			1
" " ".....	Swine..	3	22		8	33
<u>Leptospira tarassovi</u> MA.....	Cattle..	1	122		5	128
" " ".....	Horse..		1			1
" " ".....	Human..		1			1
" " ".....	Swine..		22		11	33
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle..		3		4	7
Pseudorabies.....	Swine..		103			103
TOTAL SEROLOGICAL TESTS.....		210	22349	91	110	22760

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR OCTOBER 1977

Accessions processed by the Diagnostic Laboratory during the month of October, 1977 by species are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	86
Equine.....	28
Porcine.....	52
Ovine.....	3
Feline.....	24
Canine.....	56
Avian.....	5
Wildlife.....	43
Other.....	28
TOTAL.....	325

This compares with 280 accessions processed during the same period in 1976.

The serology section of the Diagnostic Laboratory is experiencing problems with hemolysis in the small plastic tail bleeders. It is believed the hemolysis results from exposing the drawn blood sample to extremes of either heat or cold. Because of the small volume of blood, the vial is unusually subjected to freezing and overheating. We suggest you do not place the filled vials on car hoods, or at chute side during freezing weather, without protection. Likewise, avoid placing the filled vial directly in front of a car heater.

Two alternatives have proven effective. If the car or pickup can be driven to chute side, place the filled vials on the seat with the heater turned down, and leave the window open just enough to conveniently reach the vials. A styrofoam chest can be used with a hot water bottle or similar devise, at chute side. Whatever method you might chose, keep in mind that hemolysis can render the blood unsuitable for some serology. Rebleeding a bunch of cattle is time consuming and expensive.



AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Bat.....	5
Cat.....	3
Cattle.....	15
Chicken.....	7
Deer.....	1
Dog.....	1
Fetus:	
Equine.....	3
Porcine.....	1
Fox.....	1
Golden Eagle.....	1
Horse.....	1
Minah Bird.....	1
Mouse.....	1
Muskrat.....	2
Owls.....	4
Rabbit.....	1
Skunk.....	10
Squirrel.....	2
Swan.....	1
Swine.....	5
TOTAL AUTOPSIES PERFORMED.....	66

SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	UNDETERMINED	TOTAL
Anaplasma CF.....	Cattle..	31	225	5		261
Bluetongue CF.....	Cattle..	3	269	24		296
" " .....	Sheep..		1			1
" " .....	Swine..		1			1
Bovine Virus Diarrhea(BVD) CF.....	Cattle..		8		45	53
Brucella abortus agglutination.....	Cattle..	34	38,434	60		38,528
" " " (card-field & market) ..	" ..		270			270
" " " .....	Elk....	5	21	1		27
" " " .....	Goat...		11			11
" " " .....	Swine..		267	1		268
* Equine Infectious Anemia(AGID).....	Horse..	1	437			438
Infectious Bovine Rhinotracheitis(IBR) CF.....	Cattle..	1	7		48	56
Leptospira autumnalis MA .....	Bison..	3			67	70
" " " .....	Cattle..	1	12		293	306
" " " .....	Human..				2	2
" " " .....	Swine..		7		29	36
Leptospira canicola MA .....	Bison..				70	70
" " " .....	Cattle..		14		307	321
" " " .....	Human..				2	2
" " " .....	Swine..		7		29	36
Leptospira grippotyphosa MA.....	Bison..				70	70
" " " .....	Cattle..	35	11		275	321
" " " .....	Human..				2	2
" " " .....	Swine..		7		29	36
Leptospira hardjo MA .....	Bison..				70	70
" " " .....	Cattle..	27	14		284	325
" " " .....	Human..				2	2
" " " .....	Swine..		7		29	36
Leptospira icterohemorrhagia MA.....	Bison..	8			62	70
" " " .....	Cattle..	6	16		301	323
" " " .....	Human..				2	2
" " " .....	Swine..	2	5		29	36

## SEROLOGY REPORT -(Continued)

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	UNDETERMINED	TOTAL
<u>Leptospira pomona</u> MA.....	Bison..	14			56	70
" " ".....	Cattle..	67	11		243	321
" " ".....	Human..				2	2
" " ".....	Swine..		7		29	36
<u>Leptospira tarassovi</u> MA.....	Bison..				70	70
" " ".....	Cattle..		14		307	321
" " ".....	Human..				2	2
" " ".....	Swine..		7		29	36
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle..	6	2		22	30
" " ".....	Goat...		1			1
Pseudorabies .....	Swine..	5	134			139
TOTAL SEROLOGICAL TESTS.....		249	40227	91	2807	43374

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

MONTANA VETERINARIANS' ANIMAL DISEASE REPORT  
AUGUST 1977

42 Veterinarians Reporting..... 28 Counties Reporting..... 34 Diseases Reported

DISEASES AND SPECIES

INDEX OF COUNTIES

CATTLE:

	2	3	4	5	6	7	8	9	10	11	12	13	16	18	20	25	26	28
Actinobacillosis.....		61															1	
Actinomycosis.....		89																
Anaplasmosis.....		2					1						1					
Bacillary hemo- globinuria.....			1									2						
Bovine respiratory disease.....	3				3	4								1				
Bovine virus diarrhea												10					1	
Cancer eye.....		54	1				4							4				
Coccidiosis.....		1		10				1			2				6			
Helminthiasis.....											6	50						
Leptospirosis.....													1		2			
Pulmonary emphysema..	13	5					9	2					20			5		
Rhinotracheitis.....																		
Urolithiasis.....	2							1				1			1			

SHEEP:

Bluetongue.....								23										
Contagious ecthyma...		110																
Enterotoxemia.....												20						
Foot-rot.....																		
Mastitis.....		2																
Poliencephalomalacia..																		

SWINE:

Arthritis.....		2																
Atrophic rhinitis...		1										20						
Erysipelas.....												2						
Influenza.....																		
Lepto-Ictera.....															2			
Swine Dysentery.....												20						

HORSES:

Encephalomyelitis...	3	7		3			1		5	6			3		1			
Infectious rhino- pneumonitis.....				8	1													1
Influenza.....	5	4	4	16				21			6	10			2			
Strangles.....		3		6	1	3		3	2		5	8	1					

DOGS:

Distemper.....	37	16	1	2	4	1		1	3	1	2	5		2				
Infectious Hepatitis..																		

FELINE:

Distemper.....					5													
----------------	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--

POULTRY:

Leukosis.....																1		
Mycoplasma.....																1		

Montana Veterinarians' Animal Disease Report (Continued)

DISEASES AND SPECIES	INDEX OF COUNTIES											TOTAL CASES	TOTAL HERDS
	29	30	31	33	38	42	47	50	51	52			
<b>CATTLE:</b>													
Actinobacillosis.....												61	61
Actinomycosis.....												90	90
Anaplasmosis.....												4	4
Bacillary hemo- globinuria.....												3	3
Bovine respiratory disease.....			4						2			17	10
Bovine virus diarrhea					1	3			1			16	5
Cancer eye.....												63	62
Coccidiosis.....				9								29	8
Hilmanthiasis.....	12											68	12
Leptospirosis.....												3	2
Pulmonary emphysema..			13			3	19		5	5		99	27
Rhinotracheitis.....						20						20	1
Urolithiasis.....			1									6	6
<b>SHEEP:</b>													
Bluetongue.....												23	2
Contagious ecthyma..												110	110
Enterotoxemia.....												20	2
Foot-rot.....									1			1	1
Mastitis.....												2	2
Polioencephalomalacia..							1					1	1
<b>SWINE:</b>													
Arthritis.....												2	2
Atrophic rhinitis...												21	2
Erysipelas.....												2	1
Influenza.....								100				100	1
Lepto-Ictera.....												2	1
Swine Dysentery.....												20	1
<b>HORSES:</b>													
Encephalomyelitis...	1		2			1			3			36	30
Infectious rhino- pneumonitis.....		4					15					29	18
Influenza.....									5			73	45
Strangles.....	6					1						39	28
<b>DOGS:</b>													
Distemper.....	1				5				2			83	83
Infectious Hepatitis									1			1	1
<b>FELINE:</b>													
Distemper.....												5	5
<b>POULTRY:</b>													
Leukosis.....												1	1
Mycoplasma.....												1	1
<b>TOTAL CASES AND HERDS.....</b>												1051	629

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Choteau	38.....	Glacier		

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STATE DOCUMENTS

STATE OF MONTANA

SEP 16 '77

DEPARTMENT OF LIVESTOCK  
ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

MONTHLY LETTER  
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&

STATE VETERINARIAN





STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - SEPTEMBER, 1977

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DR. GLOSSER TO BE STATE VETERINARIAN

DR. JAMES W. GLOSSER B.S., D.V.M., Washington State University, has been named by the Board of Livestock to assume the duties of State Veterinarian and Administrator, Animal Health Division, Montana Department of Livestock on October 1, 1977. Dr. Glosser has been a staff member since September 1, 1973, serving as Chief, Bureau of Disease Control. He has also served as Public Health Veterinarian with the Montana Department of Health.

Dr. Glosser is a native of Helena. After his high school education, he worked in the Departments serology laboratory at Helena during the heavy brucellosis testing program in the late 50's and attended Carroll College. Receiving his Doctor of Veterinary Medicine degree from Washington State in 1963, he practiced at Miles City through 1965. In 1966 he was named Chief, Center of Disease Control, Field Activities at Atlanta and later El Paso on the Mexican Border Rabies Program. In August 1967 he was named to assume the responsibilities of rabies eradication on the island of Guam which was successfully accomplished within five months and for which supervision he received the honor of Governors Commendation, Territory of Guam.

In 1969 Dr. Glosser pursued graduate study at the University of Minnesota, received his Master of Public Health degree in 1971 and did further graduate work in epidemiology and leptospiral microbiology.

Dr. Glosser is especially qualified to assume the duties of state veterinarian. He well deserves the support of the Montana veterinarians and the backing of Montanas livestock producers and public for he is an expert in animal disease and the zoonotic diseases.

RABID PET SKUNK EXPOSES TEN PEOPLE

A pet skunk, born this spring and deodorized by a local non-veterinarian exposed ten people of three families, in the eastern Montana city of Sidney. A positive FA diagnosis of rabies was made on the skunk brain August 10, 1977 The anti-rabies treatment was begun with anti-sera flown in on Wednesday, August 10, 1977.

Montana veterinarians have long stood on the principal adopted by the state Montana Veterinary Medical Association that skunks would not be surgically descented for clients wishing to make pets of them. In this case, we have a lay person serving as a hero in this dramatic role of major human exposure. two litter mates of this rabid skunk were traced and both have perished from other causes.

## LABORATORY SYMPOSIUM

Beckwith Hubbell, D.V.M.

The Montana Department of Livestock and the Veterinary Science Department, Montana State University, are presenting a Symposium covering Bovine Immunology and Respiratory Disease Complex, Thursday and Friday, September 15th and 16th, 1977. The symposium will be held on the M.S.U. campus and all practitioners in Montana should have received a brochure and registration form by this time. The fee will be \$20.00, which includes the symposium, printed handouts, note taking material, and lunch Thursday noon.

Dr. Donald Johnson, D.V.M., Ph.D., Professor of Large Animal Clinical Sciences, Diagnostic Virology and Serology, College of Veterinary Medicine, University of Minnesota, will be the featured speaker. The symposium is designed to provide practical information that should find immediate application in your practice. You will have the opportunity to actively participate in the program.

It is our hope that this will be the first of many such symposiums, covering a variety of subjects of interest to practitioners. Future symposiums will be planned to cover both the large and small animal field. Your support by participation, is needed to justify the time, effort, and expenditures involved in this type of continuing education.

Hours of the symposium will be applicable toward continuing education requirements for Veterinary License renewal.

If you did not get a brochure or need additional information, please call the Diagnostic Laboratory at telephone 586-5952.

## HEBGEN LAKE FREE OF AGAL POISON

Gallatin County Sanitarian, Erick Armstrong, announced August 31, 1977 that Grayling Arm of Hebgen Lake was considered free of the toxic bluegreen algae and was no longer a hazard to tourists or animals. It had been responsible for the death of at least 35 cattle and 8 dogs.

The presence of a high concentration of Anabaena flos-aque algae was found June 28, 1977 but apparently was present in the large "arm" of Hebgen about June 20th when dogs died mysteriously after drinking the water. The blue-green algae was sited out in Hebgen Lake from the 1500 acre Grayling Arm from the air in mid-summer but serious consequences were not identified. During the first week of August the toxic level was found to be abating and on August 9th the closed areas were re-opened but County Health Officer Dr. Edward King said the water should not be considered fit for humans or livestock.

This report of the blue-green algae water poisoning was the only one received in Montana in 1977. For being a drought year in much of Montana, including the mountains, this lake at over 6500 foot elevation would have been considered as that least likely to have been the site for such growth and toxic formation.

## WESTERN ENCEPHALITIS IN MONTANA

Cases of equine encephalitis (western) made their appearance in Montana beginning July 15, 1977. By mid-August sickened horses were being reported in almost half of the counties in Montana. All cases reported were confined to the eastern half of the state. The incidence of cases was increasing quite rapidly but cooler weather late in August seemed to have had a marked impact in diminishing cases. In most areas the mosquito population was less than usual.

A telephone survey of the state in mid-August supported the probability of 125 equine cases having been observed. At month's end, 11 cases were reported back as serologically positive for WEE and one positive on histopath on about 50 samples submitted from sickened horses. One human was identified as WEE positive on serology in western Montana.

## MONTANA PRESENTED BOVINE TB FREE CERTIFICATE

A certificate of Accreditation was presented state officials of Montana August 18, 1977 by representative of USDA, Veterinary Services. Lieutenant Governor Ted Schwinden accepted the Accredited Bovine Tuberculosis Free Certificate from Dr. E. A. Schilf, Assistant to the Administrator, Washington, D.C. Present for the ceremony at the August meeting of the Governor's Ad-Hoc Committee on Agriculture were Ralph Parker, Board of Livestock Member, representing the dairy industry of Montana, Dr. Mahlon Huffman, Area Veterinarian In Charge, Bismarck, North Dakota and Dr. G. C. Halver, State Veterinarian.

Montana is the 11th state to be recognized by USDA as accredited free. Others previously achieving their free status for cattle tuberculosis are Connecticut, Colorado, Maine, Minnesota, New Hampshire, New Mexico, North Dakota, Rhode Island, Utah and Wyoming.

## SEPTEMBER NEWSLETTER IS FAREWELL

This "Monthly Newsletter" of the Animal Health Division, Department of Livestock is my last such contribution to the livestock industry and the veterinary profession. Effective October 1, I will be pursuing the advantages of retirement.

Since the retirement of Dr. John Safford on September 1, 1973, who now resides at Rollins on the shores of beautiful Flathead Lake, an effort has been made to maintain a monthly communication of department news and important developments in the regulatory field of veterinary medicine. As Dr. Safford wrote in the August letter of 1973, "Dr. W. J. Butler wrote the first monthly letter on September 30, 1932, and addressed it to all Deputy State Veterinarians". Dr. Safford did not miss an issue in his 17 years, and that standard has been maintained. Some issues have been pleasing to the editor, others I wish I had back but the best chronological record of disease history has been maintained and has become a request item with many livestock people and veterinary oriented readers in industry.

In this 36 years of duty in different positions of the department, I have accumulated a great many friends and cherish the experiences that have been afforded me in my native state. I'll be sticking around most of the time - fishing, funning

and digging in the ol' records of veterinary medicine and the department. To a very excellent staff and to a great many friends I say --

So long for now,

Glenn Halver

#### SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR JULY 1977

The laboratory accessions processed for the month of July, 1977 are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	108
Equine.....	14
Porcine.....	24
Ovine.....	5
Feline.....	8
Canine.....	25
Avian.....	11
Wild life.....	35
Other.....	27
Misc.....	0
	<u>257</u>

This compares with 290 accessions processed during the same period of time, 1976. This month saw the first positive serology for Western Encephalomyelitis for 1977. As I prepare this, we now have 8 serological positive cases of WEE.

It might be of interest to note the diagnosis of 16 different neoplasms submitted from the canine patient during the month. The small animal neoplasms are of particular interest to the pathologists.

Only six Human Exposure Rabies specimens were processed during the month. Thirty-three non-human exposure cases were processed. None of the 39 cases proved positive for Rabies.

#### AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Antelope.....	1
Bat.....	11
Beaver.....	7
Cat.....	5
Cattle.....	3
Chicken.....	8
Deer.....	5
Dog.....	3

# AUTOPSIES PERFORMED REPORT (cont.)

<u>SPECIES</u>	<u>NUMBER</u>
Elk.....	3
Ferrett.....	1
Goose.....	3
Magpie.....	1
Mink.....	1
Parakeet.....	1
Parrot.....	1
Pelican.....	1
Raccoon.....	1
Sheep.....	3
Skunk.....	5
Squirrel.....	2
Swan.....	2
Swine.....	6
Turkey.....	3
<u>TOTAL AUTOPSIES PERFORMED.....</u>	<u>77</u>

## SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Cattle.....	4	142		146
Bluetongue CF.....	Cattle.....		192	4	196
" ".....	Sheep.....		1		1
Bovine Virus Diarrhea(BVD) CF.....	Cattle.....	4	6		10
Brucella abortus agglutination.....	Canine.....	1	4		5
" " " ".....	Cattle.....	98	21,292	113	21,503
* " " " ".....	..(card - field & market)....	"	1		1
" " " ".....	..(seminal plasma).....	"	1		1
" " " ".....	Deer.....		9		9
" " " ".....	Goat.....		12		12
" " " ".....	Horse.....		3		3
" " " ".....	Squirrel.....		2		2
" " " ".....	Swine.....		92		92
" " " ".....	..(card - field & market)....	"	25		25
Brucellosis Ring Test.....	Cream.....		1		1
Equine Infectious Anemia(AGID).....	Horse.....	2	582		584
Infectious Bovine Rhinotracheitis(IBR) CF.....	Cattle.....	2	8		10
Leptospira autumnalis MA.....	Canine.....	2			2
" " " ".....	Cattle.....	2	47		49
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel.....		2		2
" " " ".....	Swine.....		3		3
Leptospira canicola MA.....	Canine.....	2			2
" " " ".....	Cattle.....		49		49
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel.....		2		2
" " " ".....	Swine.....		3		3
Leptospira grippotyphosa MA.....	Canine.....		1		1
" " " ".....	Cattle.....	1	48		49
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel.....		2		2



## SEROLOGY REPORT - (Continued)

Page seven

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira grippityphosa</u> MA.....	Swine.....		3		3
<u>Leptospira hardjo</u> MA.....	Canine.....		2		2
" " " ".....	Cattle.....	1	48		49
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel...		2		2
" " " ".....	Swine.....		3		3
<u>Leptospira icterohemorrhagia</u> MA.....	Canine.....		2		2
" " " ".....	Cattle.....		42		42
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel...		2		2
" " " ".....	Swine.....		3		3
<u>Leptospira pomona</u> MA.....	Canine.....	2			2
" " " ".....	Cattle.....	4	46		50
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel...		2		2
" " " ".....	Swine.....	1	2		3
<u>Leptospira tarassovi</u> MA.....	Canine.....		2		2
" " " ".....	Cattle.....		49		49
" " " ".....	Goat.....		1		1
" " " ".....	Horse.....		5		5
" " " ".....	Human.....		1		1
" " " ".....	Squirrel...		2		2
" " " ".....	Swine.....		3		3
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle.....	4	4		8
Pseudorabies.....	Swine.....		70		70
TOTAL SEROLOGICAL TESTS.....		130	22,866	117	23,113

\*Test results reported from the Diagnostic Laboratory, Bozeman and various out-of-state laboratories.

MONTANA VETERINARIANS' ANIMAL DISEASE REPORT  
JULY 1977

180 Veterinarians Reporting..... 38 Counties Reporting..... 40 Diseases Reported

DISEASES AND SPECIES

CATTLE:

	1	2	3	4	5	6	7	8	9	10	11	13	15	16	18	19	20	21
Actinobacillosis....		11																3
Actinomycosis.....	2		28											2				
Anaplasmosis.....			1						1							8	3	
Avitaminosis A.....												1						
Bacillary hemo- globinuria.....				1								1	1		10			
Blackleg.....															25			
BVD.....																	2	
Cancer eye.....	8	5	19				1	2						3	6			1
Coccidiosis.....				3					4			1	1		7	10	1	
Bovine Respiratory Disease.....								1				2	3		6		3	
Enterotoxemia.....				4														
Foot-rot.....																		
Helminthiasis.....	1											30						
Leptospirosis.....												1						
Pulmonary emphysema..			12												14			3
Rhinotracheitis.....				2													1	
Urolithiasis.....									1			2			2		2	
Virus diarrhea.....						2												
Infectious kerato- conjunctivitis.....																		

SHEEP:

Contagious ecthyma..			30															
Enterotoxemia.....												35						
Erysipelas.....							1											
Foot-rot.....																5		
Helminthiasis.....																		
Mastitis.....			15															
REO.....			6															
Vibriosis.....																		

SWINE:

Arthritis.....			5															
Atrophic rhinitis...			1											1				
Enteritis.....												1						
Erysipelas.....												60					6	
Influenza.....																		
Swine dysentery.....											25	35					3	

HORSES:

Distemper.....																		
Encephalomyelitis...				2					1	1		1					8	
Infectious anemia...																		
Infectious rhino- pneumonitis.....	10			30	1				19	16		3		5				
Influenza.....		23	17	73	5	6						35			38			
Leptospirosis.....																		
Strangles.....		5		16	1		2		2			2						

DOGS:

Distemper.....	3	37	22	6	2	3					1	2			1			4
Infectious hepatitis	1	4		1													3	
Leptospirosis.....																		

POULTRY:

C.R.D.....											2							
------------	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--



## DISEASES AND SPECIES

## INDEX OF COUNTIES

CATTLE:	22	24	27	29	31	33	36	37	38	39	40	42	43	44	47	49	51	52
Actinobacillosis.....	13																	
Actinomycosis.....																		
Anaplasmosis.....	1	8								6								
Avitaminosis A.....																		
Bacillary hemo- globinuria.....																		
Blackleg.....	1																	
BVD.....																		
Cancer eye.....										4			2					
Coccidiosis.....			12		10				15					50			1	
Bovine Respiratory Disease.....			15				15						2				1	
Enterotoxemia.....																		
Foot-rot.....	300																	
Helminthiasis.....				4		12				1								
Leptospirosis.....									1									
Pulmonary emphysema..							2			8				1		8		8
Rhinotracheitis.....	10																1	
Urolithiasis.....		2	1							3				1				
Virus diarrhea.....	1		1		10				10									
Infectious kerato- conjunctivitis.....													21					
SHEEP:																		
Contagious ecthyma...												1						
Enterotoxemia.....										1		1						
Erysipelas.....																		
Foot-rot.....																	1	
Helminthiasis.....																		
Mastitis.....																		
REO.....																		
Vibriosis.....												1						
SWINE:																		
Arthritis.....																		
Atrophic rhinitis....																		
Enteritis.....																		
Erysipelas.....		4												5				
Influenza.....										2								
Swine dysentery.....			10															
HORSES:																		
Distemper.....			1															
Encephalomyelitis....			7					1		3		2						
Infectious anemia....		1															1	
Infectious rhino- pneumonitis.....				3								2					8	
Influenza.....	21		23					2		5	100	50			35		25	
Leptospirosis.....			2															
Strangles.....	8			12					10		30					1	2	
DOGS:																		
Distemper.....	3	8		1					4		1							
Infectious hepatitis..									1									
Leptospirosis.....									2									
POULTRY:																		
C.R.D.....																		

## DISEASES AND SPECIES

DISEASES AND SPECIES	INDEX OF COUNTIES												TOTAL CASES	TOTAL HERDS
	54	56												
<b>CATTLE:</b>														
Actinobacillosis....													27	14
Actinomycosis.....													32	31
Anaplasmosis.....													28	10
Avitaminosis A.....													1	1
Bacillary hemo- globinuria.....													13	4
Blackleg.....													26	3
BVD.....													2	1
Cancer eye.....													51	41
Coccidiosis.....													115	18
Bovine Respiratory Disease.....		2											50	16
Enterotoxemia.....													4	4
Foot-rot.....													300	20
Helminthiasis.....													48	11
Leptospirosis.....													2	2
Pulmonary emphysema.													56	17
Rhinotracheitis....													14	4
Urolithiasis.....													14	14
Virus diarrhea.....													24	5
Infectious kerato- conjunctivitis....													21	2
<b>SHEEP:</b>														
Contagious ecthyma..													31	3
Enterotoxemia.....													37	5
Erysipelas.....													1	1
Foot-rot.....													1	1
Helminthiasis.....													5	1
Mastitis.....													15	6
REO.....													6	4
Vibriosis.....													1	1
<b>SWINE:</b>														
Arthritis.....													5	3
Atrophic rhinitis...													2	2
Enteritis.....													1	1
Erysipelas.....													75	5
Influenza.....													2	1
Swine dysentery....													73	7
<b>HORSES:</b>														
Distemper.....													1	1
Encephalomyelitis...													26	26
Infectious anemia...													2	2
Infectious rhino- pneumonitis.....	14												111	66
Influenza.....													458	139
Leptospirosis.....													2	2
Strangles.....		1											92	40
<b>DOGS:</b>														
Distemper.....		5											103	89
Infectious hepatitis													10	10
Leptospirosis.....													8	8
<b>POULTRY:</b>														
C.R.D.....													2	1
<b>TOTAL CASES AND HERDS</b>													1,901	646

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Choteau	38.....	Glacier		



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STATE OF MONTANA

DEPARTMENT OF LIVESTOCK  
ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

SHELVED WITH  
PERIODICALS

STATE DOCUMENTS

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MONTHLY LETTER

BOARD OF LIVESTOCK

ROBERT G. BARTHELMESS, CHAIRMAN..MILES CITY  
ROBERT L. DESCHAMPS..... RONAN  
EUGENE C. DONALDSON..... HELENA  
FRED A. JOHNSTON..... GREAT FALLS  
VERNON V. KELLER..... FISHTAIL  
RALPH J. PARKER..... FORT SHAW  
ROBERT M. SIMONS..... TURNER

G. C. HALVER, D.V.M.

ADMINISTRATOR

&

STATE VETERINARIAN



STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - AUGUST, 1977

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MONTANA DESIGNATED BOVINE TUBERCULOSIS FREE

The Montana Department of Livestock officials were advised in early July that Montana had achieved Bovine Tuberculosis Accredited-Free Status, effective July 1, 1977. This announcement was made from the office of Dr. J. C. Jeffries, North Central States Regional Director, U.S.D.A., Hyattsville, Maryland.

The program for cattle tuberculosis control and eradication was formally initiated in Montana in 1926. Sheridan County in the northeast corner of the state was the first county in which all cattle were tested for tuberculosis and at the close of 1928, nine counties had achieved the status of modified accredited tuberculosis free area with 0.03 per cent reactors. On December 1, 1935 all 56 counties had been declared "modified accredited" by testing those herds remaining after the very heavy drought sell-off of 1934.

Montana is the 11th state to be declared Bovine Tuberculosis Accredited Free. This new classification is based on the absence of any finding of bovine type tuberculosis in the past 5 years; in fact, we have had no *Mycobacterium bovis* isolates in more than 20 years. As an "accredited free" state, our cattle will be more acceptable to some states as feeders and breeding cattle. Within the state it means that the Grade A milk producer will not be required to have a dairy herd test each six years. The owner of the dairy herd selling raw milk to the consumer, will continue to meet the annual tuberculin test requirement.

PSEUDORABIES - MONTANA'S APPROACH

Throughout all of the United States there have been major moves in development of policy and rules on pseudorabies in swine. Our response to the presence of the disease in Montana has been accelerated but held within limits by the time table procedures of the Montana Administrative Code. Our swine industry representatives have requested reasonable measures for control of diagnosed herds and protection from imports that might be diseased.

Montana has had only the two herd diagnoses made in December and January at opposite ends of this long state. Both remain under quarantine, still producing litters and selling direct to slaughter under release. A limited surveillance in central Montana has yielded no serum neutralization (SN) test positives in over 275 samples. A good alert is now being maintained for the presence of pseudorabies by both our producers and veterinarians.

Pseudorabies is a reportable and quarantinable disease in Montana. Any species identified as a victim of pseudorabies by way of serology, positive laboratory culturing or clinical evidence is subject to quarantine provisions under Sub-Chapter 2 "Communicable or Dangerous Disease - General Provisions". Effective August 26, 1977 provisions were initiated to provide for quarantine release of swine. This new Sub-Chapter 2 Section 32-2.6A(2)-S611 permits herds and premises to be released from pseudorabies quarantine upon:

1. Negative SN tests or other approved test made on all swine 4 months



of age and over at least 60 days after the last clinical sign of the disease and the last reactors were removed, or

2. The death of all quarantined animals through euthanization or sale direct to an approved slaughter destination accompanied by a quarantine release.

3. The removal of some or all pseudorabies quarantined swine to other premises specifically approved on a case by case basis by the state veterinarian to receive such animals. The approved premises may or may not be already under quarantine. (Examples could be consolidation of feeder swine from one or more quarantined herds to another quarantined premises or at a non-breeding feeder premise where all swine would be handled as quarantined. Home quarantined premises could then carry out testing and progress to quarantine release.)

4. Premises and transporting vehicles must be cleaned and disinfected.

5. The Department may order disposal by slaughter of any reactor swine.

Breeding swine for shipment into Montana or for exhibition that are 3 months of age and over, effective last May 5, 1977, must be negative to the SN or other approved test made not more than 30 days prior to entry and be from a swine herd which the inspecting veterinarian can certify as having had no clinical evidence of pseudorabies in the previous 12 months.

Consideration is being made as to the appropriate use of the new "Pseudorabies Vaccine, MLV, Porcine Cell Live" recently offered on the veterinary market. It is presumed it will be allowed only on a basis of special permit to the veterinarian using it on approved recipient herds.

#### TOTAL STATE BRUCELLOSIS RECERTIFICATION APPROVED

Notification was given the Animal Health Division of the Department of Livestock in early July that the entire state had been "recertified" as a Bovine Brucellosis Certified Free Area. This advisement came from Dr. John C. Jeffries, North Central Regional Director, U.S.D.A. at Hyattsville, Maryland. The significance of this notification rests in the change from recertifying by county or blocks of counties as was the procedure in original "certification" in April 1971 when the first block of 13 counties in western Montana was declared "certified free". Following those counties other blocks or individual counties became eligible until the total 56 were "certified" in March 1973.

The state has, as of this writing 29 herds under quarantine in 12 counties as brucellosis infected. The recertification accomplished for the entire state comes as a result of demonstrating effectively to the U.S.D.A. brucellosis staff and other officials that the measures required by federal rules and methods are being appropriately applied. Strict enforcement and qualification has to be met on quarantine herds, tracer herds, reactor disposal and retests. Dr. Jeffries said in his notification "Dr. John D. Kopec, District Veterinarian In Charge (USDA, VS), is to be commended on the excellence of the report. The reviewer has no need to ask additional questions nor to doubt that Montana's eradication program is being carried out as a strong program".



Montana's "strong program" for brucellosis eradication is the combined pursuits of Dr. James W. Glosser as Chief, Disease Control Bureau, Dr. Paul Holcomb as Brucellosis Epidemiologist (USDA), dedicated laboratory and field staffs, a determined Board of Livestock and an understanding for the need of such effort by our cattle producer, tough as his plight is at this time.

Making no promises, it is the desire of all to make Montana truly free of brucellosis in the shortest time possible.

#### BOVINE BRUCELLOSIS IN MONTANA-STATUS REPORT

James W. Glosser, D.V.M.

In fiscal year 1977, a cumulative total of 106 herds were quarantined because of brucellosis reactors compared to 139 herds in fiscal year 1976 - a 24 percent decrease. A 36 percent decrease in the number of reactors was noted as 1,722 were reported in 1977 compared to 2,469 in 1976. Much of these decreases resulted in the implementation of rules adopted by the Board of Livestock pertaining to the required test on the change-of-ownership in cattle. That rule and others became effective November 4, 1975, and since that date 258,122 cattle (14,797) lots have been tested. This testing has been responsible for the detection of reactors in 45 herds, none of which were herds where slaughter (MCI) reactors have been detected. Of interest, only 16 of those 45 herds were so detected in this fiscal year 1977.

The import rule requiring a 30-60 day retest of cows imported from states or provinces where brucellosis infection still exists, has proven to be a valuable tool in preventing secondary spread of the disease. To date of the 773 import consignments, reactors or suspects were detected in six. This retest provision prevented the unnecessary testing of several native herds and avoided secondary spread of the infection into clean Montana cattle.

The percent of calves officially vaccinated against brucellosis in fiscal year 1977 was essentially the same as fiscal year 1976. The data suggested that the Montana producers vaccinated approximately 51 percent of the total 1975 and 1976 heifer crops respectively and therefore, took heed to the alert from departmental personnel related to the resurgence of brucellosis.

Misuse(overage and/or owner vaccination) of Strain 19 vaccination continues to offer the greatest challenge and is the major deterrent to the eradication of brucellosis in Montana; however, improvement in these areas was also noted. For example, of the 6,660 lots of cattle tested for the change of ownership in fiscal year 1976, 248 lots contained one or more suspect(s) that required additional testing and herd investigation. This is in contrast to fiscal year 1977 where 14,797 lots of cattle were tested and only 64 suspects required additional testing and investigation. In most instances the suspects were eventually identified as overage vaccinates. Subsequent retests of these suspects rendered serologic information that remained equivocal; therefore, many were required to be slaughtered for laboratory cultural studies to render judgment as to the brucellosis status of that herd of origin. Additional progress was noted in that of the 63 quarantined herds existing in August 1976 where reactors were slaughtered, 20 (32 percent) were considered to be due to misuse of Strain 19 vaccine. whereas in August of 1977, of the 29 infected herds six (21 percent) were considered to be due to the misuse of Strain 19 vaccine. Figure 1 shows the geographic distribution in Montana where Strain 19 vaccine misuse has been a problem in the past four years.

JULY 1, 1972 THROUGH JUNE 30, 1977

101 OF 229 (44 PERCENT) QUARANTINED HERDS WERE QUARANTINED

101 OF 229 (44 PERCENT) QUARANTINED HERDS WERE QUARANTINED  
DUE TO MISUSE (OVERAGE VACCINATION) OF STRAIN 19 VACCINE.

No. 1050 — County Outline Map  
STATE PUBLISHING COMPANY  
Helena

KEY: VACCINE / TOTAL  
QUARANTINE / QUARANTINE  
HERDS



### CAUDAL FOLD TUBERCULIN RESPONSES MUST BE REPORTED

Tuberculin testing will be lessened in the state now that Montana has achieved "Accredited Free" status. Testing to comply with export requirements of the state of destination and the routine post-mortum inspection at slaughter will be the "detection" or surveillance tools at play. Bovine tuberculosis has been absent from Montana for many years but Mycobacterium avium serotypes persistently remain in our environment and are sensitizing some of our cattle.

Any response to the caudal fold use of tuberculin in cattle should be promptly reported to the Helena office. All of the District Deputies and Section Veterinarians in the state are trained in applying the comparative-cervical Tb test on such animals reacting to the tuberculin test. This is an excellent tool in establishing the suspect or reactor status of those animals with the caudal fold response and will be a good assist in judgment for the practitioner.

We have information that on October 1, 1977 or as soon after as possible there will be a change from the presently used "Heat Concentrated Synthetic Media" (HCSM) old tuberculin to the "Purified Protein Derivative" (PPD) tuberculin. A recall will be made on all old tuberculin in practitioners hands and the PPD tuberculin will be the standard supply thereafter.

### NEW DEPUTY STATE VETERINARIANS

The following Deputy State Veterinarians were appointed on July 27, 1977:

Anne H. Johnson, D.V.M..... Malta  
Bill J. Robinson, D.V.M..... Columbia Falls  
Matt E. Tombre, D.V.M..... Billings

### VETERINARY SYMPOSIUM

The Montana Department of Livestock, Animal Health Division and the Veterinary Science Department of Montana State University presents a Veterinary Symposium "Bovine Immunology and Respiratory Disease Complex", Thursday and Friday September 15 and 16, 1977 at the Montana State University Campus, Bozeman, Montana.

Advance registration is requested and you will be receiving a brochure in the mail.

# SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR JUNE 1977

Total accessions for the month of June by specie are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	91
Equine.....	57
Porcine.....	11
Ovine.....	9
Feline.....	20
Canine.....	30
Avian.....	11
Wildlife.....	77
Other.....	19
TOTAL.....	325

This number compares with 271 accessions processed in June of 1976.

During June, nine human exposure rabies suspects were processed, none of which were found rabid. Eighty-seven non-human exposure cases were processed, seven (all wildlife) were found to be rabid.

Dr. Maurice Hull, VRL physiologist is interested in seeing fresh brain tissue from bovine dying of pulmonary emphysema. It is necessary that the brain be removed as soon after death as possible, to prevent post mortem changes from occurring. If you see a field case or cases of pulmonary emphysema, please call Dr. Hull at (406) 994-4705 collect --- for instructions on how to remove and ship the brain specimen. The request for specimens is part of Dr. Hull's research on pulmonary emphysema. He would appreciate all the cooperation he can get. Thank you.

## AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Bat.....	4
Bear.....	1
Cat.....	5
Cattle.....	13
Chicken.....	3
Coyote.....	3
Dog.....	3
Fetus:	
Bovine.....	2
Porcine.....	1
Mouse.....	2
Raccoon.....	3
Sheep.....	2
Skunk.....	13
Swine.....	8
TOTAL AUTOPSIES PERFORMED.....	63

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Cattle.....	4	618	1	623
" " ".....	Swine.....		4		4
Bluetongue CF.....	Cattle.....		178		178
* " " ".....	Horse.....		1		1
* " " ".....	Swine.....		4		4
Bovine Virus Diarrhea (BVD) CF.....	Buffalo.....		1		1
" " " " ".....	Cattle.....		84		84
" " " " ".....	Goat.....		1		1
Brucella abortus agglutination.....	Bison.....		1		1
" " " " ".....	Cattle.....	128	25,915	153	26,196
" " " " ".....	..(card - field & market)....		7		7
* " " " " ".....	" ".....		560		560
" " " " ".....	Dog.....	1	2	1	4
" " " " ".....	Elk.....		10		10
" " " " ".....	Goat.....		1		1
* " " " " ".....	Horse.....		34		34
" " " " ".....	" ".....		1		1
" " " " ".....	Sheep.....		2		2
" " " " ".....	Swine.....		1		1
" " " " ".....	..(card - diag. lab.).....	1	206		207
Brucellosis Ring Test.....	Cream.....		30		30
*Equine Infectious Anemia (AGID).....	Horse.....	2	844		846
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle.....		78		78
Leptospira autumnalis MA.....	Cattle.....	8	509		517
" " " " ".....	Dog.....		1		1
" " " " ".....	Goat.....		2		2
" " " " ".....	Horse.....	1	6		7
" " " " ".....	Human.....		1		1
" " " " ".....	Swine.....		3		3
Leptospira canicola MA.....	Cattle.....		517		517
" " " " ".....	Dog.....		1		1
" " " " ".....	Goat.....		2		2
" " " " ".....	Horse.....		7		7
" " " " ".....	Human.....		1		1
" " " " ".....	Swine.....		3		3

## SEROLOGY REPORT - (Continued)

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira grippotyphosa</u> MA.....	Cattle.....		517		517
" " ".....	Dog.....		1		1
" " ".....	Goat.....		2		2
" " ".....	Horse.....		7		7
" " ".....	Human.....		1		1
" " ".....	Swine.....		3		3
<u>Leptospira hardjo</u> MA.....	Cattle.....	42	524		566
" " ".....	Dog.....		1		1
" " ".....	Goat.....		2		2
" " ".....	Horse.....		7		7
" " ".....	Human.....		1		1
" " ".....	Swine.....		3		3
<u>Leptospira icterohemorrhagia</u> MA.....	Cattle.....	1	514		515
" " ".....	Dog.....		1		1
" " ".....	Goat.....		2		2
" " ".....	Horse.....	1	6		7
" " ".....	Human.....		1		1
" " ".....	Swine.....		3		3
<u>Leptospira pomona</u> MA.....	Cattle.....	151	417		568
" " ".....	Dog.....		1		1
" " ".....	Goat.....		2		2
" " ".....	Horse.....	1	6		7
" " ".....	Human.....		1		1
" " ".....	Swine.....		3		3
<u>Leptospira Tarassovi</u> MA.....	Cattle.....	1	516		517
" " ".....	Dog.....		1		1
" " ".....	Goat.....		2		2
" " ".....	Horse.....		7		7
" " ".....	Human.....		1		1
" " ".....	Swine.....		3		3
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle.....		60		60
Pseudorabies.....	Swine.....		102		102
TOTAL SEROLOGICAL TESTS.....		342	32,354	155	32,851

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.



## MONTANA VETERINARIANS' ANIMAL DISEASE REPORT

JUNE 1977

89 Veterinarians Reporting. . . . .29 Counties Reporting. . . . .31 Diseases Reported

## DISEASES AND SPECIES

## INDEX OF COUNTIES

CATTLE:	1	2	3	4	5	6	7	8	11	13	15	18	20	22	23	24	25	27
Actinobacillosis.....		3																
Actinomycosis.....		1	24					2								4		
Anaplasmosis.....																		
Bacillary hemo- globinuria.....							1			1	2						8	
Blackleg.....												15						
Bovine Respiratory Disease.....										12		3						
Cancer Eye.....	3	7	13		1		4	2		2								
Clostridium sordellii..												8						
Coccidiosis.....			20					80		50								12
Foot-rot.....							2											
Helminthiasis.....							3			100	2							
Infectious keratitis...																		
Pulmonary emphysema....			2															
Rhinotracheitis.....										1								4
Urolithiasis.....			4						1	1		2				2		1
Virus diarrhea.....								5					2					
SHEEP:																		
Arthritis.....			2															
Coccidiosis.....					60													
Contagious ecthyma.....															3			
Enterotoxemia.....				1						2					5			
SWINE:																		
Arthritis.....			1															
Atrophic rhinitis.....			2															
Erysipelas.....										5			1			14		
Greasy Pig.....																		6
Swine Dysentery.....										20								
HORSES:																		
Infectious Anemia.....																1		
Infectious Rhino- pneumonitis.....			3	14	44	13		5								3		8
Influenza.....					5	42				50	15	10						50
Strangles.....			6		7	3		2		16								
DOGS:																		
Distemper.....		21	13	3	5	4			1	3		2		3		2	2	1
Infectious Hepatitis...		2		2														
Leptospirosis.....							1											
POULTRY:																		
Avian Hepatitis.....																		40

## Montana Veterinarians' Animal Disease Report (Continued)

JUNE 1977

## DISEASES AND SPECIES

## INDEX OF COUNTIES

## CATTLE:

	29	30	38	39	40	42	44	47	51	53	55	TOTAL CASES	TOTAL HERDS
Actinobacillosis.....												3	3
Actinomycosis.....												27	27
Anaplasmosis.....	3											7	4
Bacillary Hemo- globinuria.....												12	4
Blackleg.....										21		36	2
Bovine Respiratory Disease.....												15	15
Cancer Eye.....												32	32
Clostridium sordellii												8	1
Coccidiosis.....				2						180		344	13
Foot-rot.....												2	2
Helminthiasis.....	16			6								124	18
Infectious keratitis.												3	3
Pulmonary emphysema..				5		1				7		15	4
Rhinotracheitis.....												5	3
Urolithiasis.....	1						2					14	14
Virus diarrhea.....			1									8	5

## SHEEP:

Arthritis.....												2	2
Coccidiosis.....												60	1
Contagious ecthyma...						1						4	3
Enterotoxemia.....						1						9	4

## SWINE:

Arthritis.....												1	1
Atrophic rhinitis....												2	2
Erysipelas.....												20	3
Greasy Pig.....												6	1
Swine Dysentery.....												20	1

## HORSES:

Infectious Anemia....												1	1
Infectious Rhino- pneumonitis.....				1		2					2	95	52
Influenza.....				4	10			12				198	97
Strangles.....	2											36	24

## DOGS:

Distemper.....	2	12	2				2	2	2			82	81
Infectious hepatitis.												4	4
Leptospirosis.....												1	1

## POULTRY:

Avian Hepatitis.....												40	1
----------------------	--	--	--	--	--	--	--	--	--	--	--	----	---

TOTAL CASES AND HERDS.....												1236	429
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Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Choteau	38.....	Glacier		



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STATE DOCUMENTS

STATE OF MONTANA JUL 1977

DEPARTMENT OF LIVESTOCK  
ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

SHELFED WITH  
PERIODICALS

MONTHLY LETTER

BOARD OF LIVESTOCK

ROBERT G. BARTHELMESS, CHAIRMAN..MILES CITY  
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EUGENE C. DONALDSON..... HELENA  
FRED A. JOHNSTON..... GREAT FALLS  
VERNON V. KELLER..... FISHTAIL  
RALPH J. PARKER..... FORT SHAW  
ROBERT M. SIMONS..... TURNER

G. C. HALVER, D.V.M.

ADMINISTRATOR

&

STATE VETERINARIAN

STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

MONTHLY LETTER - JULY, 1977

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ALGAL POISONING NEAR YELLOWSTONE PARK

Sudden illness and prompt death in tourist dogs was observed June 28, 1977 when they stopped at Rainbow Bay on the Grayling Arm of Hebgen Lake a few miles outside of Yellowstone Park. Within hours a field diagnosis of blue-green algae had been made by a veterinarian and it was confirmed at the Department Diagnostic Laboratory in Bozeman the following day. A water sample from the bay was found to contain a very high concentration of the strept-like chains of *Anabaena flos-aquae* algae. Two dogs were known to have died June 20th with similar history but no diagnosis was made.

Before all of the necessary official actions of the Montana Department of Health, Gallatin County Health, U.S. Forest Service and other agency protective measures could be implemented in closing access to the "Arm" the algae had taken its toll. Twenty-eight cattle and eight dogs reportedly died of the toxin and a few human swimmers were reported to have been sickened.

This experience of blue-green algae poisoning is not new to Montana. It is, however, most unusual this early in the season and unique for having occurred at high mountain elevations. Hebgen Lake is a main stream lake on the channel of the Madison River coursing out of Yellowstone Park. The lake level is at 6533.91 feet elevation, impounded by a 87½ foot dam. The water of this blue ribbon trout stream and lake is looked upon as high in mineral content and free of harmful contaminants. Grayling Arm is different. It is a bay area of approximately 1500 acres, not on the mainstream of the Madison river, and is fed by creek drainages of short courses from Yellowstone Park. It enters the main Hebgen Lake through a narrows. It is a popular use area for tourists during the season from Memorial Day to Labor Day.

The drouthy winter responsible for a very low percent of normal runoff, may be a major factor in this problem. The absence of inflow may have accommodated stagnation different from any other portion of the lake or of our other high elevation lakes. The water temperature in the "Arm" June 28th was 66°. The lake level was less than one foot below that of July 1 normal, a level maintained this year by trimming release flow to a fish survival minimum to maintain water for later peak hydro-electric energy needs.

This algae poison problem is unlike any of recall or record in Montana mountainous regions. Over the years, livestock losses have occurred on ponds and reservoirs in the eastern Montana plains area when the level of those bodies of water get low and the water temperature warm. The absence of algae identification, water temps and other factors in those past experiences do not permit analysis of subject matter for comparison or contrast to this unusual and alarming development. It is of concern that the Hebgen Lake situation which is now receiving the blue-green algae through the narrows may be a precursor to significant developments on the Madison and other mountain lakes. The low water level of reservoirs in the plains areas, because of the drought might more commonly become the site of short term loss patterns of cattle and sheep. Veterinarians and stockmen should be alert to the blue-green algae poisoning potential.

## BOARD OF LIVESTOCK DISCIPLINES VETERINARIAN

Dr. W. Hryckiwi, a veterinarian practicing in Havre was disciplined by the Board of Livestock for failure to comply with disease control rules of the Department of Livestock. In a hearing conducted before the Board on June 23rd he was found to have written health certificates without having inspected the animals listed on the health certificate. The Board also determined that Dr. Hryckiwi failed to secure the brucellosis test of some of his own cattle at a change of ownership in a livestock market at which he was the veterinary inspector. On six other charges made by the State Veterinarian against the defendant relating to rule violations in managing his brucellosis infected herd, Hryckiwi was found not guilty by the Board Hearing Committee.

The Board sustained the temporary suspension ordered March 10, 1977, by Dr. Glenn C. Halver, State Veterinarian, and extended it to June 30.

Dr. Hryckiwi was also issued a letter of reprimand admonishing him for his poor service to the livestock industry and the veterinary profession. The Board also required that Dr. Hryckiwi participate in special training sessions with the Department of Livestock to remedy deficiencies in his performance.

The hearing was conducted before board members, Fred Johnston of Great Falls, presiding hearing officer; Bob Deschamps, Ronan; Gene Dondaldson, Helena; Vern Keller, Fishtail; and Ralph Parker, Fort Shaw.

## LUPINE-INDUCED CROOKED CALF DISEASE AND A MANAGEMENT METHOD TO REDUCE INCIDENCE

The following material was taken from the Oregon Animal Health News May, 1977 edited by Guy E. Reynolds, Extension Veterinarian. The spotty drought in Montana which has seriously reduced available forage generally accepted by livestock, makes this article of timely significance in relation to summer breeding season.

Highlight: Crooked calf disease is procured when pregnant cows between the 40th and 70th days of gestation graze certain members of the genus Lupinus that contain the quinolizidine alkaloid anagyrene. Calves born to these cows may have twisted or bowed limbs (arthrogryposis), twisted or bowed spine (scoliosis or kyphosis), twisted neck (torticollis), cleft palate, or a combination of any of these. The concentration of the teratogen anagyrene in these lupines is very high early in growth, decreases to a low level during flowering, rises abruptly in mature seeds, and decreases to a very low level after seeds have dropped. Data collected from 6 ranches for 8 to 25 year periods showed no consistent correlation between incidence of the disease and the free-choice feeding of a variety of mineral supplements. Marked variation in incidence did occur, however, during these periods. The variation was related to the period of gestation at which the cows grazed the lupine and to the stage of growth of the lupine--in other words, the amount of anagyrene ingested. Management programs that prevent pregnant cows from eating highly teratogenic early growth or seed-stage lupine plants between gestation days 40 and 70 will reduce crooked calf disease incidence.

Richard F. Keeler et. al.,  
Published in Journal of Range Management  
30(2) March, 1977

## SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR MAY 1977

Laboratory accessions for the month of May, 1977, by specie are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	228
Equine.....	60
Porcine.....	5
Ovine.....	22
Feline.....	15
Canine.....	33
Avian.....	14
Wildlife.....	23
Other.....	23
 TOTAL.....	 423

The 228 bovine accessions included 28 attempts to isolate the Brucella organism from slaughter samples.

Sixteen rabies specimens, involving human exposure, were processed. None were found positive.

Twenty-five non-human exposure cases were processed for rabies. Eleven of these were found to be positive, one bovine and ten wildlife (skunks).

It is interesting to note that of the 56 counties in Montana, seventeen of those counties were represented with one or no specimens during the month of May. That is 30 percent of the counties either do not have the services of a Veterinarian, or those Veterinarians are not utilizing the laboratory services. That is a very interesting statistic.

### Pseudorabies Serum Neutralization Testing

The laboratory is now running the serum neutralization test for pseudorabies antibodies. Serum samples should be collected and transported in commercial blood tubes. Brucellosis blood tubes may contain toxic substances causing a non-specific reaction which prevents the tissue culture system from growing. Three ml of serum is preferable to insure an adequate amount for proper testing.

## AUTOPSIES PERFORMED REPORT

May, 1977

SPECIES	NUMBER
Bat.....	5
Cat.....	6
Cattle.....	12
Chicken.....	17
Deer.....	1
Falcon.....	1
Fetus:	
Bovine.....	2
Lovebird.....	1
Mouse.....	1
Parakeet.....	1
Raccoon.....	1
Skunk.....	5
Squirrel.....	1
Swine.....	4
Turkey.....	3
TOTAL AUTOPSIES PERFORMED.....	61

## SEROLOGY REPORT

Page 5

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF	Cattle		190		190
"	Elk	1			1
"	Goat			1	1
Bluetongue CF	Cattle		195	8	203
"	Goat		1		1
"	Sheep		1		1
Bovine Virus Diarrhea (BVD) CF	Cattle	19	24		43
Brucella abortus Agglutination	Bison		17	3	20
"	Canine	2	4		6
"	Cattle	242	31,557	224	32,023
"	(card - field & market)		1		1
"	Elk		9		9
"	Goat		3		3
"	Horse		96		96
"	Human	1	2		3
"	Sheep		2		2
"	(card - diag. lab.) Swine		91		91
Brucellosis Ring Test	Cream		355		355
*Equine Infectious Anemia (AGID)	Horse	1	1,067		1,068
Infectious Bovine Rhinotracheitis (IBR) CF	Cattle	5	23		28
Leptospira autumnalis MA	Caprine		1		1
"	Cattle	7	860		867
"	Horse	1	6		7
"	Human		5		5
"	Ovine		1		1
"	Swine		1		1
Leptospira canicola MA	Caprine		1		1
"	Cattle	1	866		867
"	Horse		7		7
"	Human		5		5
"	Ovine		1		1
"	Swine		1		1
Leptospira grippotyphosa MA	Caprine		1		1
"	Cattle	9	858		867
"	Horse		7		7
"	Human		5		5
"	Ovine		1		1
"	Swine		1		1



## SEROLOGY REPORT - (Continued)

Page 6

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira hardjo</u> MA.....	Caprine.....		1		1
" " ".....	Cattle.....	179	688		867
" " ".....	Horse.....		7		7
" " ".....	Human.....		5		5
" " ".....	Ovine.....		1		1
" " ".....	Swine.....		1		1
<u>Leptospira icterohemorrhagia</u> MA.....	Caprine.....		1		1
" " ".....	Cattle.....	2	841		843
" " ".....	Horse.....	4	3		7
" " ".....	Human.....		5		5
" " ".....	Ovine.....		1		1
" " ".....	Swine.....		1		1
<u>Leptospira pomona</u> MA.....	Caprine.....		1		1
" " ".....	Cattle.....	147	721		868
" " ".....	Horse.....	1	6		7
" " ".....	Human.....		5		5
" " ".....	Ovine.....		1		1
" " ".....	Swine.....		1		1
<u>Leptospira tarassovi</u> MA.....	Caprine.....		1		1
" " ".....	Cattle.....	3	864		867
" " ".....	Horse.....		7		7
" " ".....	Human.....		5		5
" " ".....	Ovine.....		1		1
" " ".....	Swine.....		1		1
<u>Parainfluenza<sub>3</sub> (PI<sub>3</sub>)</u> HA.....	Cattle.....	2	1		3
TOTAL SEROLOGICAL TESTS.....		627	39436	236	40,299

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

May, 1977

53 Veterinarians Reporting.....26 Counties Reporting .....26 Diseases Reported

## DISEASES AND SPECIES

## INDEX OF COUNTIES

	1	2	3	4	5	6	7	8	10	15	16	18	21	24	25	27	30	34
<b>CATTLE:</b>																		
Actinobacillosis.....		11	19															
Actinomycosis.....	2		140					1			3		1					
Anaplasmosis.....														2				
Bacillary hemo- globinuria.....												1						
Blackleg.....												2		1				
Bovine Respiratory Disease.....								3								514		
Bovine Virus Diarrhea.								2										2
Brisket edema.....																		
Cancer Eye.....	3	5	64				4	2			6		1					
Coccidiosis.....					2							10		1		17		
Enterotoxemia.....																		
Helminthiasis.....					1													200
Infectious keratitis..			96															
Listeriosis.....			1															
Pulmonary emphysema...									1									
Rhinotracheitis.....																114		
Urolithiasis.....					1							3		2		1		
Vibriosis.....														150				
<b>SHEEP:</b>																		
Coccidiosis.....					40													
Contagious ecthyma....																		
Enterotoxemia.....												5						
<b>SWINE:</b>																		
Erysipelas.....																		2
Swine Dysentery.....																2		
<b>HORSES:</b>																		
Infectious Rhino- pneumonitis.....					3			1								4		
Influenza.....			6	3	25							2				25		2
Strangles.....		2		4						1		1		1				
<b>DOGS:</b>																		
Distemper.....					2	6								1	1		7	
Infectious hepatitis..					1													
Leptospirosis.....		1																
<b>POULTRY:</b>																		
Avian Vibrionic Hepatitis.....																10		

DISEASES AND SPECIES	INDEX OF COUNTIES										TOTAL CASES	TOTAL HERDS
	36	38	39	44	47	49	51	53				
<u>CATTLE:</u>												
Actinobacillosis.....											30	30
Actinomycosis.....											147	147
Anaplasmosis.....											2	1
Bacillary hemo- globinuria.....											1	1
Blackleg.....											3	3
Bovine Respiratory Disease.....	20										537	14
Bovine Virus Diarrhea		10									14	6
Brisket edema.....												
Cancer Eye.....			2								87	87
Coccidiosis.....		20									50	7
Enterotoxemia.....						8					8	6
Helminthiasis.....											201	2
Infectious keratitis..											96	96
Listeriosis.....											1	1
Pulmonary emphysema..						1					2	2
Rhinotracheitis.....				15							129	2
Urolithiasis.....	5		2			3		1			18	13
Vibriosis.....											150	1
<u>SHEEP:</u>												
Coccidiosis.....											40	1
Contagious ecthyma....						1					1	1
Enterotoxemia.....						2					7	2
<u>SWINE:</u>												
Erysipelas.....			1								3	2
Swine Dysentery.....											2	1
<u>HORSES:</u>												
Infectious Rhino- pneumonitis.....											8	5
Influenza.....						8					71	37
Strangles.....			2								11	9
<u>DOGS:</u>												
Distemper.....		2			1		2				22	21
Infectious hepatitis..											1	1
Leptospirosis.....											1	1
<u>POULTRY:</u>												
Avian Vibrionic Hepatitis.....											10	1

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Choteau	38.....	Glacier		

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JUN 20 '77

STATE DOCUMENTS

STATE OF MONTANA

DEPARTMENT OF LIVESTOCK  
ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

CHIEVED WITH  
PERIODICALS

MONTHLY LETTER

BOARD OF LIVESTOCK

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G. C. HALVER, D.V.M.

ADMINISTRATOR

&

STATE VETERINARIAN



STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

MONTHLY LETTER - JUNE, 1977

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MONTANA STATE UNIVERSITY SELECTS VETERINARIANS FOR HIGH POSITIONS

William J. Tietz, B.A., M.S., D.V.M., Ph.D.

The state Board of Regents recently announced the selection of Dr. William J. Tietz as President of Montana State University. He will assume his duties August 1, 1977 at the Bozeman campus succeeding Dr. Carl W. McIntosh.

Dr. Tietz has served as Dean of the College of Veterinary Medicine and Biomedical Science at Colorado State University, Fort Collins since 1971. He received his B.A. at Swart H. Moore College in 1948, achieved his M.S. at University of Wisconsin in 1952 and his D.V.M. from Colorado State in 1957. Dr. Tietz was awarded his Ph.D. at Purdue in physiology-pathology in 1961.

In 1964 he returned to Colorado State University to serve as professor in physiology and from 1967 to 1971 was chairman of that department in the School of Veterinary Medicine. During the academic year of 1970-71 he was Vice President of Student University Relations.

Dr. Tietz has made several earlier visits to the campus of Montana State University. He has been a prompter in the development of a Regional Veterinary Program with Montana State University under the auspices of WICHIE and has spent much time in supporting a CSU-MSU intercampus program for veterinary education. The presence of Dr. Tietz on the Montana State University campus will enhance the accomplishment of such an arrangement.

David M. Young, D.V.M., M.S., Ph.D.

Director J. A. Asleson, Montana Experiment Station, Montana State University, Bozeman announced June 3rd that Dr. David M. Young had accepted the position of Head, Veterinary Research Laboratory, Bozeman. Dr. Young spent much of his younger life in Montana, achieved his D.V.M. from the School of Veterinary Medicine, Colorado State University in 1966, M.S. in Comparative Pathology at Ohio State 1967 and Ph.D. in 1970 in Comparative Pathology from the same university. Since 1970 he has been involved in intensive research at the National Cancer Institute, National Institute of Health, Bethesda, Maryland. In Dr. Youngs relatively short veterinary career he has published or been associated with an unusual number of research findings and research developments. Dr. Young will be in the Veterinary Research Laboratory August 1st, succeeding Dr. Richard E. Dierks who resigned to become Dean, School of Veterinary Medicine, University of Illinois.

The appointment of these two veterinarians brings to Montana men of broad experience and proven capability. Their presence at Montana State will surely be of great benefit to the food animal industry, the Montana veterinarians and the students and citizens of our state. We welcome them with enthusiasm and wish for great support and accomplishment in their respective positions on the campus.



## BOARD OF LIVESTOCK DENIES RULE TO BRAND EIA REACTORS

More than 40 people were present for the EIA hearing at 1:30 p.m. April 21, 1977. Hearing Notice MAC 32-2-24 requiring the hot-iron branding of equidae found on the Coggins test to be reactors was presented by Board Vice Chairman Eugene C. Donaldson as Hearing Officer. Staff members of the Animal Health Division briefly reviewed the characteristics of EIA, the Coggins test as the officially adopted test, the incidence of the disease in Montana and the factors of disease control to which the Division might be obligated.

No persons present responded to the hearing officers request for proponents. More than 15 presented testimony in opposition to the branding of reactors and some pursued arguments against the Coggins test and the import rule requiring negative test of equidae over 6 months of age within the previous 6 months.

A summary of the comments made on the EIA questionnaire passed to all those attending is as follows:

1. Do you favor the approach of the rules considered today which merely require this identification of the reactor? Yes 5 No 28  
By Brand? Yes 3 No 25 Other means? Yes 4 No 16
2. Do you think more stringent EIA rules should be considered as quarantine of the reactors? Yes 3 No 28 Of the herd? Yes 2 No 25  
Test and eradication of EIA in the infected herd? Yes 4 No 22
3. Do you favor the Department having no rules on EIA applying to native Montana horses? Yes 21 No 9
4. Will You and the horse industry support any part of the needed and desired costly EIA research? Yes 21 No 8  
Disease control testing on basis of school districts, county or certain area designation? Yes 5 No 22
5. Approximately how many horses do you have on your home or ranch premises? Replies varied from 1-115

On the basis of the testimony received at the hearing and reviewed by the Board of Livestock on May 18, 1977, the Board voted unanimously against the adoption of the rule to hot-iron brand Coggins reactor horses as a state requirement.

## OBSERVATION OF EIA REACTORS ON TRACK

The American Veterinary Medical Journal Volume 170 June 1, 1977 No. 11 presents material edited by L. Coggins, D.V.M., Ph.D. and J. A. Auchnie, M.R.C.V.S. entitled "Control of Equine Infectious Anemia In Horses In Hong Kong". Because of the disease being in Montana in low incidence (108 positive of 13,000 + tested since 1972), measures for control of the reactor have been countered with pleas, some of which are emotional, that the Coggins test reactors are unaffected and are not serving as exposing animals even in a vector environment. Excerpting the Journal of AVMA we read under "Discussion",

Due to the fear and stigma frequently associated with EIA virus-infect-



ed horses, it usually is not possible to collect data on the relationship between infection with EIA virus and the ability of infected horses to continue to perform. The racetrack in Hong Kong has offered a unique opportunity to obtain such information because of the controlled management of these horses. All horses were owned by the Royal Hong Kong Jockey Club and were stabled at the racetrack or moved to their Beas River riding club when they were no longer able to compete. Replacements were imported each year, mostly from Australia.

While at the racetrack, the horses were classified according to their ability to race. As their performance deteriorated, they were dropped to a lower class and eventually retired to the Beas River riding club. Although there were a few EIA virus-infected horses in which the ability to race did not appear to be adversely affected, most infected horses were in the slower race classes or were retired to the Beas River riding club because of poor performance. Thus, we conclude that EIA virus infection had an adverse effect on the performance of most infected horses in this study.

The data suggest that much of the spread of EIA took place among horses while at the Beas River riding club area. Until 1973, it was a policy for many of the racehorses to be rested at the Beas River riding club when not racing (June-September) and to be brought back to the racetrack in the fall. The racehorses were exercised alongside many of the resident horses at Beas River. Thus there appears to have been ample opportunity for spread of EIA because a high percentage of horses at Beas River riding club were infected, and blood-sucking horseflies were abundant year-round. The prohibition of movement of horses from Beas River to the racetrack was probably a major factor in limiting further spread of EIA during the last 4 years. However, one case of EIA transmission did occur in a horse that had been at the racetrack only.

Future monitoring of horses in Hong Kong for EIA will prove whether an area such as Hong Kong can eliminate EIA infection by destroying all infected horses and preventing the introduction of infected horses.

#### NEW FORM SV-10 SMALL ANIMAL HEALTH CERTIFICATE

The Animal Health Division has developed a new small animal health certificate form (SV-10) in books of 25 certificates. This new form is a radical departure from its predecessor for it conspicuously calls for more animal description and rabies vaccination information. The form has been adopted from the recommendations of the Rabies Committee, United States Animal Health Association which for four (4) years has been working on this uniform health certificate.

It is not intended to be a rabies vaccination certificate, as some might assume from the blanks furnished in the upper 2/3 of the form.

About June 20th, books of the new forms will be sent to each practitioner. We request that the new form be initiated July 1, 1977 for use as a health certificate on small animals (dogs, cats, raccoons, etc.) which require vaccination or a statement for same. On that same date of July 1, 1977 remove

the next blank copy of the old Form SV-10's you now have. Send that blank into our Helena office signed so we will have that as a record of the last certificate to be accounted for on that date in that book. Then destroy the remainder of that book. This accounting need applies to each book you have.

Be aware of the four-part carbonless certificate needing the pad insert under each numbered set as you complete same.

We hope you will appreciate this new approach to needed information on small animal health certificates.

MANLY A. MOORE, SR. 1907-1977

The Department received word of the death of Manly A. Moore, Sr., Powderville on May 26, 1977 at a Rapid City, South Dakota hospital. Mr. Moore served as a wool-grower representative on the "Livestock Commission" and "Livestock Sanitary Board" from March 1, 1959 to March 1, 1971 with distinction and devotion to the livestock producers and citizens of Montana.

# SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR APRIL 1977

Accessions handled by the Diagnostic Laboratory for April, 1977 are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	213
Equine.....	58
Porcine.....	42
Ovine.....	13
Feline.....	16
Canine.....	39
Avian.....	11
Wildlife.....	23
Other.....	22
TOTAL.....	437

Nine specimens were processed for FA examination for rabies, involving human exposure. All were negative.

Thirty specimens were FA examined for rabies, involving no human exposure. Three (all skunks) were found to be positive.

April was a busy, but routine month.

## AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Cat.....	5
Cattle.....	33
Chicken.....	8
Coyote.....	2
Dog.....	1
Fetus:	
Bovine.....	8
Ovine.....	3
Magpie.....	1
Moose.....	1
Mountain goat.....	1
Mule deer.....	1
Myna bird.....	1
Owl.....	2
Sheep.....	12
Skunk.....	6
Swine.....	11
Turkey.....	1
TOTAL AUTOPSIES PERFORMED.....	97

EROLOGY REPORT

PAGE 6

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
anaplasma CF.....	Addax....		4		4
" ".....	Cattle....		429	1	430
bluetongue CF.....	Addax....		4		4
" ".....	Cattle....	3	420	1	424
" ".....	" ".....		100		100
bovine Virus Diarrhea (BVD) CF.....	" ".....	8	24		32
brucella abortus agglutination.....	Addax....		5		5
" " " ".....	Bison....	19	59	3	81
" " " ".....	Canine....		2		2
" " " ".....	Cattle....	89	23,234	115	23,438
" " " " (card-field & market).....	" ".....		105		105
" " " " (seminal plasma).....	" ".....		3		3
" " " ".....	Elk.....	1	28	1	30
" " " ".....	Goat....	1	11		12
" " " ".....	Horse....		6		6
" " " ".....	Swine....	1	82		83
" " " " (card-field & market).....	" ".....		143		143
brucellosis Ring Test.....	Cream....		1		1
Equine Infectious Anemia (AGID).....	Horse....	2	770		772
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle....	5	219		224
Leptospira autumnalis MA.....	Caprine... Cattle.... Horse.... Human....	 3 13 1	 334 13 1	   	 3 337 13 1
Leptospira canicola MA.....	Caprine... Cattle.... Horse.... Human....	 337 13 1	  13 1	   	 3 337 13 1
Leptospira grippotyphosa MA.....	Caprine... Cattle.... Horse.... Human....	 337 13 1	 3 13 1	   	 3 337 13 1
Leptospira hardjo MA.....	Caprine... Cattle.... Horse.... Human....	 19  	 3 318 13 1	   	 3 337 13 1

## SEROLOGY REPORT - (Continued)

PAGE 7

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira icterohemorrhagiae</u> MA.....	Caprine.....		3		3
" " " .....	Cattle.....		337		337
" " " .....	Horse.....	6	7		13
" " " .....	Human.....		1		1
<u>Leptospira pomona</u> MA.....	Caprine.....		3		3
" " " .....	Cattle.....	41	296		337
" " " .....	Horse.....		13		13
" " " .....	Human.....		1		1
<u>Leptospira tarassovi</u> MA.....	Caprine.....		3		3
" " " .....	Cattle.....		337		337
" " " .....	Horse.....		13		13
" " " .....	Human.....		1		1
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle.....	5	8	34	47
Pseudorabies.....	Swine.....		3		3
TOTAL SEROLOGICAL TESTS.....		203	28,069	155	28,427

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

MONTANA VETERINARIANS' ANIMAL DISEASE REPORT  
APRIL 1977

88 Veterinarians Reporting..... 28 Counties Reporting..... 33 Diseases Reported

DISEASES AND SPECIES

INDEX OF COUNTIES																				
CATTLE:	1	2	3	4	6	7	8	10	11	12	13	15	16	17	18	19	20	21		
Actinobacillosis.....		14									1									
Actinomycosis.....	1		11								2									
Bacillary hemo- globinuria.....											1									
Blackleg.....						1														
Bovine Respiratory Disease.....				10		15				15					1		8			
Bovine Virus Diarrhea																				
Cancer eye.....	4	7	6			2	1						6							
Coccidiosis.....				6							50						1			
Diphtheria.....							1			2										
Grass tetany.....											101									
Helminthiasis.....																				
Infectious keratitis.	40																			
Leptospirosis.....																				
Rhinotracheitis.....						12		4			1									
Urolithiasis.....				3			4				1	1					2			
SHEEP:																				
Arthritis.....			5																	
Enterotoxemia.....											10					2				
Mastitis.....			19																	
Vibriosis.....																				
White muscle disease.																				
SWINE:																				
Abscess.....			1																	
Arthritis.....			15																	
Atrophic rhinitis...			4																	
Enteritis.....			1						7											
Erysipelas.....				4							3									
Swine dysentery.....											25									
Tumor.....			1																	
HORSES:																				
Infectious rhino- pneumonitis.....				3						3	1									
Influenza.....				4						2	32						6			
Strangles.....		11		6		1					13						2	1		
DOGS:																				
Distemper.....	34	3			2	1				5	3							3		
Infectious hepatitis.	2					1				1	1									
Leptospirosis.....	1																			
POULTRY:																				
Pullorum.....																			1	

DISEASES AND SPECIES	INDEX OF COUNTIES											TOTAL CASES	TOTAL HERDS
	22	23	24	26	27	28	29	36	39	52			
<b>CATTLE:</b>													
Actinobacillosis.....												15	15
Actinomycosis.....							3					18	17
Bacillary hemo- globinuria.....												1	1
Blackleg.....												1	1
Bovine Respiratory Disease.....					5							54	19
Bovine Virus Diarrhea					1							1	1
Coccidiosis.....			4		114			5	40			220	9
Diphtheria.....					11							11	3
Grass tetany.....												3	3
Helminthiasis.....									6			107	6
Infectious keratitis.							6					40	40
Leptospirosis.....												6	1
Rhinotracheitis.....	40			50								107	8
Urolithiasis.....					8			1	1	2		23	22
Cancer eye.....							4		1			31	31
<b>SHEEP:</b>													
Arthritis.....												5	4
Enterotoxemia.....									2			14	4
Mastitis.....												19	13
Vibriosis.....			15									15	1
White muscle disease.					4							4	1
<b>SWINE:</b>													
Abscess.....												1	1
Arthritis.....												15	9
Atrophic rhinitis....												4	4
Enteritis.....		8										15	2
Erysipelas.....				3								10	5
Swine dysentery.....												25	1
Tumor.....												1	1
<b>HORSES:</b>													
Infectious rhino- pneumonitis.....												7	6
Influenza.....					20				9			73	31
Strangles.....												34	24
<b>DOGS:</b>													
Distemper.....						1	2		2			56	55
Infectious hepatitis.												5	5
Leptospirosis.....												1	1
<b>POULTRY:</b>													
Pullorum.....												1	1
<b>TOTAL CASES AND HERDS.....</b>												943	346



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Montana Veterinarian's Animal Disease Report - Continued

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INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Chouteau	38.....	Glacier		

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STATE DOCUMENTS

STATE OF MONTANA

DEPARTMENT OF LIVESTOCK  
A N I M A L   H E A L T H   D I V I S I O N

HELENA, MONTANA 59601

M O N T H L Y   L E T T E R

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ADMINISTRATOR

&

STATE VETERINARIAN



STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - MAY, 1977

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MONTANA DROUGHT CREATING CONCERN

Following a fall and winter of unusually low precipitation records in nearly all sections of Montana, each dry day into the growing season causes increased alarm for the future of our already economically depressed livestock industry. Like conditions in nearly all of the eleven western states, reserve water supplies are much below the normal of the spring run-off, roughage supplies are being depleted and spring grass growth is absent or limited. In April, Montana had unusually warm temperatures and rainfall varied from 1% of normal to 50% of normal for the month, except the mining town of Butte with 71%. Although the "rain-y" season of late May & June has, in many years, changed a drought course to a year of average or better forage and grain production, we are beset this year with wind and more wind and little snow in the mountains for summer irrigation.

In Montana, six task-force drought groups have been named, one of which is the agriculture agencies group. Methodology is in progress to monitor energy, finance, hydro-electric, stored water, soil moisture and other important aspects of the ever growing problem into a readiness state for systematic reporting, alerts, and action. By such measures, tools for study and preparation can be declared with federal assistance by identification of an area as an "Emergency Designated Drought Area". This step leads to the rapid evaluation of counties or state for acute consideration of the area as the "Disaster Drought Area".

Staff members of the Department of Livestock are involved in this planning and are zealous in the need for involving the livestock producers throughout Montana in the monitoring of the drought impact, measures of remedy most needed on a time basis in counties or areas of the state and advisements on time tables for use of choices, such as they may be, in dire disaster circumstances.

In the Animal Health Division, all signals are go for achieving tests, inspections, retests and any beneficial livestock health provisions to avoid impairment or delay of livestock movement because of embargos or quarantine provisions if we find such emergency measures to be necessary. All state and federal animal health field and laboratory personnel are working full capacity schedules on brucellosis and other problems; they are not getting any leisure breaks because of stormy weather.

EQUINE INFECTIOUS ANEMIA REACTOR IDENTIFICATION HEARING HELD

A public hearing was held April 21, 1977 at Helena to take testimony on rules proposed by the Department of Livestock to use the hot-brand in identification of equine reactors found on the Coggins (AGID) test. The testimony was received by hearing officer Eugene C. Donaldson, Vice Chairman of the Board of Livestock, Helena.

There were more than 40 people present for the hearing, held in conformity with the Montana Administrative Procedures Act, wherein more than 25 people requested

that a public hearing be set to consider the rules proposed in the public hearing Notice MAC 32-2-24. That notice contained the definitions needed for clarity of the pertinent rule, which required those reactors found on the Coggins test or any other official EIA test in Montana to be hot-iron branded within 2 weeks on the off-mane side of the neck with 81A and probably two number digits.

The testimony at this hearing was strongly against the adoption of the reactor branding rule. There was, along with much comment not dealing with the subject, a consensus of disfavor towards the earlier adopted import rule requiring the negative Coggins test of all equidae entering Montana.

The Board of Livestock, in its regular session May 18, 1977 at Helena will review the hearing findings and make a decision on this proposed reactor branding rule.

### ILLINOIS AGAIN ERADICATES BOVINE TB

The Illinois Department of Agriculture February 1977 issue of "Agscene" tells a story of overcoming the misfortunes of a serious bovine tuberculosis outbreak in that state. *M. bovis* had come to Illinois more than a year ago by way of exposed dairy cows from a dispersed dairy herd not known to be infected and from beef cattle out of a purebred herd that was reportedly negative but results were those of a "paper" tuberculin test.

Measures for control yielded these figures:

	McHenry County <u>Outbreak</u>	Southern County <u>Outbreak</u>
Illinois Counties Involved.....	3 ...	40
Herds Tested.....	191 ...	118
Cattle Tested.....	10,488 ...	7,287
Tuberculin Test Reactors.....	116 ...	93
Herds Revealing Reactors.....	23 ...	26
Herds with Lesioned Reactors.....	5 ...	9
Herds with Laboratory Confirmed <u>M. bovis</u> .....	5 ...	2
Lesion Herds Depopulated.....	5 ...	7
Cattle Depopulated in Lesion Herds.....	513 ...	591

The two task force operations and the extensive tracing and epidemiology involved in this tuberculosis problem placed a severe strain on both U.S. and Illinois Department of Agriculture in areas of manpower and finances. A total of \$65,262.05 in state indemnity was paid to owners in McHenry County and \$100,671.89 to those in southern Illinois.

This Illinois Tb problem has been the least spectacular and most effectively eradicated of three such occurrences recently in the U.S. Attributable to all three state problems was malpractice and inexcusable conduct by accredited veterinarians. Montana has not had a M. bovis case since 1944. This story allows for Montana to have such an exposed bovine shipped to us and it might be months before we detect the misfortune. But for a Montana veterinarian to observe a caudal fold response to tuberculin and give it no reportable heed will deserve a penalty like we seldom have reason to consider.

SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR MARCH, 1977

The March 1977 accessions processed by specie are as follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	280
Equine.....	37
Porcine.....	20
Ovine.....	27
Feline.....	7
Canine.....	27
Avian.....	1
Wildlife.....	17
Other.....	<u>26</u>
TOTAL.....	442

This compares with 307 accessions processed in March 1976.

As would be expected, March saw seventy-eight abortion problems processed thru the Laboratory. Most involved the submission of the aborted fetus. Scour problems were beginning to show up also. We have been able to cooperate with Dr. Lyle Myers, Veterinary Research Laboratory on E. coli isolates made from scours problems presented to the Laboratory. Dr. Myers is determining the enteropathogenicity of the particular isolates, using the K-99 antigen. This information is relayed on to the Veterinarian, though usually following the final report. K-99 antigen is present in all pathogenic E. coli of bovine origin. Six strains of pathogenic E. coli are incorporated in the VRL Scour Vaccine now being field tested by Fort Dodge. We appreciate Dr. Myers' interest and cooperation in this effort.

Fourteen human exposure rabies specimens were processed, none of which were positive.

Eighteen non-human exposure rabies specimens were processed, four of these were determined positive for rabies, all wildlife.

# AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Cat.....	4
Cattle.....	30
Chicken.....	3
Dog.....	1
Falcon.....	1
Fetus:	
Bovine.....	29
Ovine.....	10
Horse.....	1
Muskrat.....	1
Raccoon.....	3
Sheep.....	4
Skunk.....	4
Swine.....	15
<u>TOTAL AUTOPSIES PERFORMED.....</u>	<u>106</u>

SEROLOGY REPORT

Page 5

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Cattle.....	3	506	1	510
" ".....	Elk.....		4		4
Bluetongue CF.....	Cattle.....		483	2	485
" ".....	Deer.....		5		5
Bovine Virus Diarrhea(BVD) CF.....	Cattle.....	5	199		204
Brucella abortus agglutination.....	Bison.....	11	60	2	73
" " " (seminal plasma).....	Cattle.....	147	26,344	132	26,623
" " " ".....	" ".....		10		10
" " " ".....	Deer.....		20		20
" " " ".....	Horse.....	1	7	1	9
" " " ".....	Sheep.....		1		1
" " " ".....	Swine.....		31		31
Brucellosis Ring Test.....	Cream.....		81		81
*Equine Infectious Anemia(AGID).....	Horse.....		647		647
Infectious Bovine Rhinotracheitis(IBR) CF.....	Cattle.....	5	182		187
Leptospira autumnalis MA.....	Canine.....		1		1
" " " ".....	Caprine.....		3		3
" " " ".....	Cattle.....	1	814		815
" " " ".....	Deer.....		21		21
" " " ".....	Horse.....	4	4		8
" " " ".....	Human.....		4		4
" " " ".....	Ovine.....		9		9
" " " ".....	Swine.....	2	3		5
Leptospira canicola MA.....	Canine.....		1		1
" " " ".....	Caprine.....		3		3
" " " ".....	Cattle.....		815		815
" " " ".....	Deer.....		21		21
" " " ".....	Horse.....		8		8
" " " ".....	Human.....		4		4
" " " ".....	Ovine.....		9		9
" " " ".....	Swine.....		5		5
Leptospira grippotyphosa MA.....	Canine.....		1		1
" " " ".....	Caprine.....		3		3
" " " ".....	Cattle.....		815		815
" " " ".....	Deer.....		21		21
" " " ".....	Horse.....	5	3		8
" " " ".....	Human.....		4		4

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.



MONTANA VETERINARIANS' ANIMAL DISEASE REPORT  
MARCH 1977

152 Veterinarians Reporting..... 42 Counties Reporting..... 34 Diseases Reported

DISEASES AND SPECIES

CATTLE:	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	18	19	20
Actinobacillosis.....		5										1			4			
Actinomycosis.....	1		60					1							3			
Atypical interstitial pneumonia.....			5															
Bacillary hemo-globinuria.....					2		1					1		3				
Blackleg.....							1					1						
Bovine Respiratory Disease.....		2	50	115	1		2						10	3		6		
Bovine Virus Diarrhea			3							3	28	1		5				1
Cancer eye.....	4		31		1			2								3	12	2
Coccidiosis.....			188			2	10	12	16			4		1		40	4	2
Enteritis: E. coli...								7										
Enteritis.....																		
Enterotoxemia.....																		
Helminthiasis.....			1				3							101				
Infectious keratitis.			12															
Leptospirosis.....				2			1				2		1			2		1
Polioencephalo-malacia.....																		
Pulmonary emphysema..		1								1								
Rhinotracheitis.....									30		25							
Salmonellosis.....																		
Tuberculosis.....																		
Urolithiasis.....		2	9		8		1	9	2		2	3	1	2		25		1
Vibriosis.....		1												300				
SHEEP:																		
Arthritis.....			3															
Contagious ecthyma...			10															
Enterotoxemia.....												3	10					
Mastitis.....			17															
Vibriosis.....			75															
White muscle disease.																		
SWINE:																		
Arthritis.....			8															
Erysipelas.....				1								4	17					2
Swine dysentery.....			15										20					
HORSES:																		
Infectious Rhino-pneumonitis.....				1			1											
Influenza.....		1		14	4								10			2		
Leptospirosis.....																		1
Strangles.....		5		19							1		15					1
DOGS:																		
Distemper.....	4	18	14	5			13		1			3	8	1		2		1
Infectious hepatitis.							2						1					
Leptospirosis.....				1				1										
POULTRY:																		
Coccidiosis.....																		

DISEASES AND SPECIES

CATTLE:	21	24	25	27	28	29	30	31	33	35	36	37	39	40	41	43	44	46
Actinobacillosis.....																		
Actinomycosis.....																		
Atypical interstitial pneumonia.....																		
Bacillary hemoglobinuria.....																3		
Blackleg.....																		
Bovine Respiratory Disease.....			2	1								28					7	
Bovine Virus Diarrhea																		
Cancer eye.....	2																	
Coccidiosis.....				50				1			41		1					
Enteritis: <u>E. coli</u> ...												4						
Enteritis.....																		
Enterotoxemia.....																		
Helminthiasis.....					2								5					
Infectious keratitis.																		
Leptospirosis.....												2					2	
Polioencephalomalacia.....												1						
Pulmonary emphysema..																		
Rhinotracheitis.....												12						
Salmonellosis.....															3			
Tuberculosis.....																		
Urolithiasis.....		6		8	4				2	2	3	4	2			3		5
Vibriosis.....																		
SHEEP:																		
Arthritis.....																		
Contagious ecthyma...																		
Enterotoxemia.....				5														
Mastitis.....																		
Vibriosis.....	35			50									1					
White muscle disease.				4														
SWINE:																		
Arthritis.....																		
Erysipelas.....		1																
Swine dysentery.....																		
HORSES:																		
Infectious Rhinopneumonitis.....																		
Influenza.....																		
Leptospirosis.....																		
Strangles.....				2														
DOGS:																		
Distemper.....				6	2	2	6					1	2				4	1
Infectious hepatitis.	1																	
Leptospirosis.....				3														
POULTRY:																		
Coccidiosis.....	15																	

DISEASES AND SPECIES	INDEX OF COUNTIES								TOTAL CASES	TOTAL HERDS
	47	48	49	51	53	56				
<b>CATTLE:</b>										
Actinobacillosis.....									10	10
Actinomycosis.....									65	65
Atypical interstitial pneumonia.....									5	2
Bacillary hemo- globinuria.....									9	6
Blackleg.....									2	2
Bovine Respiratory Disease.....						6			233	44
Bovine Virus Diarrhea				20					61	16
Cancer eye.....									57	54
Coccidiosis.....				3					375	33
Enteritis: <i>E. coli</i> ...									4	4
Enteritis.....									7	2
Enterotoxemia.....			12						12	8
Helminthiasis.....				1					113	19
Infectious keratitis.									12	12
Leptospirosis.....									13	10
Polioencephalo- malacia.....		1							2	2
Pulmonary emphysema..									2	2
Rhinotracheitis.....				2					69	6
Salmonellosis.....			2						5	4
Tuberculosis.....									2	2
Urolithiasis.....	10			1	5				118	85
Vibriosis.....									301	2
<b>SHEEP:</b>										
Arthritis.....									3	2
Contagious ecthyma...				9					19	4
Enterotoxemia.....									18	4
Mastitis.....									17	11
Vibriosis.....									161	4
White muscle disease.									4	1
<b>SWINE:</b>										
Arthritis.....									8	6
Erysipelas.....									25	8
Swine dysentery.....									35	4
<b>HORSES:</b>										
Infectious Rhino- pneumonitis.....									2	2
Influenza.....						3			34	28
Leptospirosis.....				1					2	2
Strangles.....				5					48	29
<b>DOGS:</b>										
Distemper.....	15			3		5			117	114
Infectious hepatitis.		1							5	5
Leptospirosis.....									5	5
<b>POULTRY:</b>										
Coccidiosis.....									15	1
<b>TOTAL CASES AND HERDS.....</b>									1,995	620

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Chouteau	38.....	Glacier		

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STATE DEPARTMENTS

MAILED WITH  
PERIODICALS

STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
ANIMAL HEALTH DIVISION  
HELENA, MONTANA 59601

MONTHLY LETTER

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G. C. HALVER, D.V.M.

ADMINISTRATOR  
&  
STATE VETERINARIAN



STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - APRIL, 1977

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CANADIAN IMPORT RULES CHANGE

The Department of Livestock has been alerted for several weeks that Canadian import rule changes on domestic animals were being promulgated. At this writing, we are placing in the "For Your Information" section, the amended sections to the Canadian import rules as they were received March 21, 1977 on federal teletype and not those sections that remain as printed in the "Interstate Rules Book". Although we lack formal notice, assurance has come from Canadian and U.S.D.A. officials, that the rules do become effective April 1, 1977.

Note in studying the rules, the new limiting impact on the acceptability of our official brucellosis vaccinated cattle in acceptance of age limits to the Canadians. Further, for sheep exports, it must be said that the new regulations requiring the complement-fixation (CF) negative test for *Brucella ovis* on both ewes and rams along with the two-test requirement for Bluetongue will make Montana sheep exports difficult. Montana found in extensive field-trial work in 1963 and 1964 that the ewe could be considered an end-host of the flock R.E.O. problem. Further, the CF test was found at that time to be an inadequate tool for disease detection in the ram.

Bleeding of Canadian export sheep, we are advised, will be done by federal veterinarians.

Drs. Kopec and Houle are to be supplied with copies of the revised Canadian import rules for mailing to Montana veterinarians.

HEARING ON EIA APRIL 21, 1977

The Montana Board of Livestock will hold a hearing on proposed rules for equine infectious anemia (EIA) on April 21, 1977 in Helena. The hearing, to be held at 1:30 p.m. at the auditorium of the Montana Department of Highways, is planned in response to numerous requests received from interested horse owners and producers.

The hearing will deal mostly with the provisions of the proposed rules, those being definitions pertaining to the language of the rules and the proposal for hot-iron branding of the reactor on the off-mane side of the neck. Inquiries as to the characteristics of EIA, the accuracy of the Coggins test and the uncertainty of the reactor being a source of the vector disease will be reviewed briefly and accurately at the hearing. The Animal Health Division has already sent out informational subject matter to those that have inquired.

The proposed rule directs that the horse, when blood tested, be properly identified for the interim period awaiting results and if it is a reactor animal, it be further identified with the hot-iron brand as required by federal rules for interstate movement for slaughter. That brand would be the 81A indicating Montana (81) and A for EIA as "B" for brucellosis. Following that will be a 2 or 3 digits as a number assigned to that horse (81A77) only.

Confusion exists with many equine owners fearing the proposed rules have broad application. That is not the case when it is realized that the proposed rules:

1. Do not require testing of any horses, mules or donkeys in Montana. The state requires at this time that only equidae entering Montana be tested (Coggins test) if over 6 months of age prior to entry, the test to have been made in the previous 6 months.
2. Do not require that other horses in a herd in which a reactor is found be tested. In that more than 40 states and Canada require that horses being imported be tested and negative, this is the most probable circumstance under which reactors would be found.
3. Will not encourage or discourage or require any fair, show, rodeo, roping event or breeding stable in Montana to require Montana horses to be tested. They will be expected to assist in causing out-of-state entries to comply with the import test rule.

The basic intent of this proposed rule is to make the reactor animal obvious to those horse owners in its presence. It can hardly be accepted that the owner of an EIA reactor or agents of the Department of Livestock keep secret from other horse owners the presence of known reactors. Reactor animals in close proximity to other equine in the fly season may expose valuable animals belonging to unaware owners; if branded a choice can be made on seeing the brand. The EIA reactor animal is not quarantined, can be used or run in an environment to which it is acceptable as an identified diseased animal.

The reactor animal is to be branded with the 2 inch digits assigned by the Department to that animal under that ownership within 2 weeks after test results are received. It is not to be sold, given away, disposed of or sent to slaughter until a release which is readily available from a deputized veterinarian is gotten. That will permit updating on the owner or party responsible for the equine and on its death, the number can be reassigned. The horse can be euthanized within that 14 days without branding; it cannot be moved across a state line without branding for it would then be a federal violation.

Any breeder, rodeo string owner or outfitter, on finding he has EIA reactors can be given herd test services on the basis that he desires to free his equine herd of the disease by disposing of reactors and retesting the herd as necessary to achieve eradication.

There are legal pursuits that people in the majority can use in an effort to eliminate the disease on a school district area basis. The Department of Livestock is not recommending this pursuit because of the low incidence of the disease and the department would have to be better funded to conduct tests of horses on that wide an area as a "EIA Disease Control Area".

#### BRUCELLOSIS RULES UPDATED; HERDS DECREASING

At a meeting of the Board of Livestock March 15 and 16, 1977 brucellosis rules were relaxed for the benefit of exhibitors of swine and cattle. Effective April 4, 1977 Montana exhibition cattle and swine at fairs otherwise required to be tested will not be required to have a negative test record for those events. Animals consigned to breeding cattle sales in conjunction with a fair, show, or exhibition, if



two (2) years of age and over, must comply with the "change of ownership" rule and have a test record. Individual fairs, shows or exhibitions may require such a test as a condition of exhibiting if they so desire. No change has been made in test requirements of out-of-state cattle or swine exhibiting at shows in Montana.

Another proposed rule change pertained to the cost of retesting suspects found on tests of cattle in which there were no reactors. It was proposed those suspects be retested at the owners expense but the rule change was denied as it was considered to be in conflict with statutory responsibility of the Animal Health Division in controlling disease.

Concern has been expressed by livestock producers and veterinarians in Montana when large out-of-state owned herds were being moved from one part of the state into their community without having been brucellosis tested. Such herds, usually managed from a non-resident central office and grazing on leased lands or operated on a partnership-like basis with Montana land and lease holders were considered needful of similar precautions provided in the change-of-ownership test rule. The Board of Livestock adopted a rule change effective April 4th that would require such investment owned herds of cattle to have a negative brucellosis test if being moved from one premise to another that is non-contiguous with the first.

Herds of cattle purchased with a ranch on which those cattle will remain may be exempted from a change-of-ownership test by the State Veterinarian, the Board decided, if only natural progeny and bulls have been added to the herd in the previous two (2) years, if the herd has maintained brucellosis vaccination of all eligible cattle and if there are no "tracers" or other indications of brucellosis applying to the herd.

The Animal Health Division staff reported to the Board that there are presently 28 herds in 12 counties now under brucellosis quarantine as infected herds. It was also brought to the Boards attention that the State of Idaho has lost "Brucellosis Free Area" status in 20 of its total 44 counties. The 20 "Modified Certified" counties involved many on the Snake river drainage where the Teton Dam flood mixed herds so badly. Several of these counties are the origin of cattle that summer graze in Montana or into which Montana cattle go for summer grazing or winter feeding. As a change from last year, those herds moving across the state line into Montana or back into Montana, will be required to have had a negative herd test within the previous 12 months. Measures are now being pursued to advise affected ranchers and aid them in adopting the best provisions available to meet state and federal rules under these circumstances.

The Board of Livestock also amended the change of ownership rule to require that buffalo and elk be tested when such a transaction occurs.

#### PET BIRD NEWCASTLE DISEASE SERIOUS THREAT

An exotic Newcastle disease briefing was hastily called by United States Department of Agriculture officials for March 24, 1977 at the University of Maryland, College Park, Maryland for the benefit of state veterinarians and federal area veterinarians in charge.

An outbreak of viscerotropic velogenic Newcastle disease (VVND) occurred in pet birds in the area of San Diego, California, about January 18, 1977. Diagnosis of Newcastle Disease came first in Virginia about February 16th in exposed birds from the San Diego area and in California on February 17, 1977. All resources available were activated. Federal and state poultry epidemiologists and emergency disease

forces responded to the task of tracing pet birds from the premises involved in the two states where positive diagnoses were made. By March 11th it was known that exposed or potentially exposed pet birds had been disbursed to 28 states. Only one flock of pheasants and one flock of chickens have thus far been involved and typically, each had high morbidity and mortality.

The main reason for the meeting was to alert all states and federal area veterinarians of the potential for this pet bird disease to get into chicken flocks in any of the 48 states. Two important factors lend to the seriousness of the pet bird VVND in relations to poultry flocks. First, there is almost no regulation of pet bird aviaries, wholesalers or retailers and tracing of shipments cannot be complete or accurate. Secondly, Newcastle Disease in some pet birds is mild, almost inapparent, with low mortality. Some of these birds, such as the parrot may excrete the virus for 400 days or more; that time element could allow pretty broad virus dissemination to highly susceptible poultry.

Montana is not one of the 28 states to which known exposed birds were shipped. However, we have prepared a review of the VVND pet bird problem for mailing to full time veterinarians, all known poultry and egg producers, all pet stores that could be identified and other interested citizens of Montana. This bulletin advises that any pet birds purchased after January 18th should be suspect. If birds received after that date have died, then attention should be paid to contact birds. Illness or deaths of contact birds or purchased pet birds should be reported directly to the Helena office or indirectly through the local veterinarian. Special caution was directed to chicken flock owners to make their employees aware of the risk of carrying the virus from pet birds at home or from neighborhood homes they might visit.

Any reports of ill or dead pet birds whose history fits the described time frame will be forwarded to our Bozeman Diagnostic Laboratory for furtherance to the Veterinary Services Diagnostic Laboratory at Ames, Iowa.

Montana pet birds, few in number and outlets, should not be in the high risk pattern of this Newcastle Disease problem. It would be a serious misfortune if in the absence of a justified alert one canary, mynah, parrot or budgerigar was responsible for the depopulation of one of our egg-laying flocks of 20,000 to 120,000 hens.

SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR FEBRUARY 1977

Accessions processed during February 1977, numbered 390. Listed below are accessions for February 1976 and February 1977 by specie:

SPECIES	TOTAL	
	1977	1976
Bovine.....	214 ....	182
Equine.....	46 ....	27
Porcine.....	23 ....	29
Ovine.....	11 ....	2
Feline.....	11 ....	16
Canine.....	51 ....	31
Avian.....	3 ....	4
Wildlife.....	9 ....	39
Other.....	22 ....	15
TOTAL.....	390 ....	345

It is interesting to note the increased accessions both in Bovine and Equine species. The canine increase reflects the increasing numbers of neoplasms, etc. being referred to the laboratory.

During February, 1977 we looked at 56 aborted fetuses. This compares with 18 necropsied in February, 1976.

Hopefully, this is a result of our effort to stress the importance of getting specimens to the laboratory in cases of abortion. And many times it requires several sets of specimens. Again we stress the value of submitting fetus, placenta, and blood from the aborting dam if at all possible. The importance of a complete work-up cannot be overemphasized.

In February the two pathologist recognized 16 different types of neoplasms involving the canine.

Seven brains were processed for rabies in which human exposure was involved. We found no positive results. Sixteen non-human exposure accessions were examined, with four (4) being positive, all in wildlife. This compares with eleven (11) and forty-three (43) respectively in February, 1976.

# AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Cattle.....	15
Chicken.....	5
Deer.....	8
Dog.....	4
Falcon.....	1
Fetus:	
Bovine.....	32
Equine.....	2
Ovine.....	11
Swine.....	3
Muskrat.....	1
Raccoon.....	1
Sheep.....	7
Skunk.....	6
Swine.....	17
TOTAL AUTOPSIES PERFORMED.....	113

SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Cattle.....	2	122		124
" ".....	Deer.....		1		1
Bluetongue CF.....	Cattle.....		134	1	135
* " ".....	" ".....		242		242
" ".....	Deer.....		2		2
Bovine Virus Diarrhea (BVD) CF.....	Cattle.....	8	122		130
Brucella abortus agglutination.....	Cattle.....	84	24,197	121	24,402
* " " ".....	" ".....		242		242
" " " (card - field & market).....	" ".....		112		112
" " " (seminal plasma).....	" ".....		5		5
" " ".....	Canine.....		1		1
" " ".....	Deer.....		2		2
" " ".....	Goat.....		34		34
" " ".....	Horse.....		1		1
" " ".....	Sheep.....		3		3
" " ".....	Swine.....		65		65
Brucellosis Ring Test.....	Cream.....		203		203
*Equine Infectious Anemia (AGID).....	Horse.....		253		253
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle.....	4	121		125
Leptospira autumnalis MA.....	Canine.....		1		1
" " ".....	Caprine.....		1		1
" " ".....	Cattle.....	1	352		353
" " ".....	Deer.....		2		2
" " ".....	Horse.....	1	1		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....		9		9
Leptospira canicola MA.....	Canine.....		1		1
" " ".....	Caprine.....		1		1
" " ".....	Cattle.....		353		353
" " ".....	Deer.....		2		2
" " ".....	Horse.....		2		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....		9		9

## SEROLOGY REPORT - (Continued)

Page 8

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira grippotyphosa</u> MA.....	Canine....		1		1
" " ".....	Caprine....		1		1
" " ".....	Cattle.....		353		353
" " ".....	Deer.....		2		2
" " ".....	Horse.....		2		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....		9		9
<u>Leptospira hardjo</u> MA.....	Canine....		1		1
" " ".....	Caprine....		1		1
" " ".....	Cattle.....	16	337		353
" " ".....	Deer.....		2		2
" " ".....	Horse.....		2		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....		9		9
<u>Leptospira icterohemorrhagiae</u> MA.....	Canine....		1		1
" " ".....	Caprine....		1		1
" " ".....	Cattle.....	1	352		353
" " ".....	Deer.....		2		2
" " ".....	Horse.....		2		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....	2	7		9
<u>Leptospira pomona</u> MA.....	Canine....		1		1
" " ".....	Caprine....		1		1
" " ".....	Cattle.....	96	260		356
" " ".....	Deer.....		2		2
" " ".....	Horse.....	1	1		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....		9		9
<u>Leptospira tarassovi</u> MA.....	Canine....		1		1
" " ".....	Caprine....		1		1
" " ".....	Cattle.....		353		353
" " ".....	Deer.....		2		2
" " ".....	Horse.....		2		2
" " ".....	Ovine.....		3		3
" " ".....	Swine.....		9		9
Parainfluenza3 (PI3) HA.....	Cattle.....	5	52		57
Pseudorabies.....	Swine.....		5		5
TOTAL SEROLOGICAL TESTS.....		221	28,401	122	28,744

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

## FEBRUARY, 1977

### 38 Diseases Reported

118 Veterinarians Reporting

38 Counties

### DISEASES AND SPECIES

CATTLE:

Actinobacillosis.....  
Actinomycosis.....  
Anaplasmosis.....  
Bac. hemoglobinuria.....  
Blackleg.....  
Bovine Respiratory Disease.....  
Bovine Virus Disease.....  
  
Cancer eye.....  
Clostridium.....  
Coccidiosis.....  
Enterotoxemia.....  
Helminthiasis.....  
Leptospirosis.....  
  
Mastitis.....  
Pneumonia.....  
Polyoencephalomalacia.....  
Pulmonary emphysema.....  
Rhinitracheitis.....  
Urolithiasis.....  
Vibriosis.....

SHEEP:

Arthritis .....  
Enterotoxemia.....  
Foot-rot.....  
Ketosis.....  
Mastitis.....  
Vibriosis.....  
Viral Pneumonia.....

## WINE:

Abscess.....  
 Arthritis.....  
 Atrophic rhinitis.....  
 Enterotoxemia.....  
 Erysipelas.....  
 Swine Dysentery.....

HORSES:

Encephalomyelitis.....  
Infectious Rhinopneumonitis.....  
Influenza.....  
Leptospirosis.....  
Strangles.....

DOGS:

Distemper.....  
Heartworm.....  
Infectious hepatitis.....  
Leptospirosis.....

INDEX OF COUNTIES														
1	2	3	4	5	6	7	8	10	11	12	13	14	15	
	3	1					4							
		40			2									
			1		1						2			
						1				2				
1	5		150	5	16					20	30		5	
	1		4		10		1	5			1		1	
5	1	16				2	1							
		17	2	10	18			9		40	290	101	2	
											250	301	1	
		12									2		2	
		1												
									1					
					27			3						
	3	13		3			5	6	1	5	1			
					15						50			
		5												
												2	1	
					1									
		4												
		100			10		12							
		8												
		1												
		1												
			3							3	12			
					20									
		1												
	2									10	20			
		6											1	
1	18	8	1		2	11				12	9			
			1				1		1		2	1		







## DISEASES AND SPECIES

## CATTLE:

Actinobacillosis.....  
 Actinomyces.....  
 Anaplasmosis.....  
 Bac. Hemoglobinuria.....  
 Blackleg.....  
 Bovine Respiratory Disease.....  
 Bovine Virus Disease.....  
 Cancer eye.....  
 Clostridium.....  
 Coccidiosis.....  
 Enterotoxemia.....  
 Helminthiasis.....  
 Leptospirosis.....  
 Mastitis.....  
 Pneumonia.....  
 Polioencephalomalacia.....  
 Pulmonary emphysema.....  
 Rhinotracheitis.....  
 Urolithiasis.....  
 Vibriosis.....

## INDEX OF COUNTIES

34	36	37	39	40	46	47	49	51	52	56
			3							
							20		3	
15						2				
	40	23	2		108			2		
			2		6		2			
		1							6	
			1							
		40	1				6			
	5	1	13			6	13	5	2	
			1							

## SHEEP:

Arthritis.....  
 Enterotoxemia.....  
 Foot-rot.....  
 Ketosis.....  
 Mastitis.....  
 Vibriosis.....  
 Viral Pneumonia.....

1 2

## SWINE:

Abscess.....  
 Arthritis.....  
 Atrophic rhinitis.....  
 Enterotoxemia.....  
 Erysipelas.....  
 Swine Dysentery.....

2

## HORSES:

Encephalomyelitis.....  
 Infectious Rhinopneumonitis.....  
 Influenza.....  
 Leptospirosis.....  
 Strangles.....

2

1

2

2

12

2

## DOGS:

Distemper.....  
 Heartworm.....  
 Infectious hepatitis.....  
 Leptospirosis.....

3

3

4

1

8

1

2

DISEASES AND SPECIESCATTLE:

	TOTAL CASES	TOTAL HERDS
Actinobacillosis.....	7	7
Actinomycosis.....	44	43
Anaplasmosis.....	2	1
Bac. Hemoglobinuria .....	5	5
Blackleg.....	3	3
Bovine Respiratory Disease .....	335	52
Bovine Virus Disease.....	44	19
Cancer eye.....	35	28
Clostridium.....	4	3
Coccidiosis.....	1334	82
Enterotoxemia.....	2	1
Helminthiasis.....	1110	44
Leptospirosis.....	25	8
Mastitis.....	1	1
Pneumonia.....	1	1
Polioencephalomalacia.....	1	1
Pulmonary emphysema.....	3	3
Rhinotracheitis.....	245	14
Urolithiasis.....	196	124
Vibriosis.....	71	4

SHEEP:

Arthritis .....	5	4
Enterotoxemia .....	9	6
Foot-rot.....	1	1
Ketosis .....	7	1
Mastitis.....	4	2
Vibriosis.....	122	3
Viral Pneumonia.....	14	1

SWINE:

Abscess.....	8	6
Arthritis.....	1	1
Atrophic rhinitis.....	2	2
Enterotoxemia .....	3	1
Erysipelas.....	20	8
Swine Dysentery.....	20	2

HORSES:

Encephalomyelitis .....	1	1
Infectious Rhinopneumonitis.....	1	1
Influenza.....	37	14
Leptospirosis.....	1	1
Strangles.....	33	21

DOGS:

Distemper.....	105	88
Heartworm .....	1	1
Infectious hepatitis.....	6	6
Leptospirosis.....	4	4

TOTAL CASES AND HERDS.....	3873	619
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Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Chouteau	38.....	Glacier		



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STATE OF MONTANA

RECEIVED WITH  
PERIODICALS

STATE OF MONTANA

DEPARTMENT OF LIVESTOCK  
ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

MONTHLY LETTER

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ADMINISTRATOR  
&  
STATE VETERINARIAN



STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - MARCH, 1977

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BLUETONGUE IN MONTANA  
D. P. Ferlicka, D.V.M.  
Department of Livestock

The agent responsible for the September-October 1976 outbreak of Bluetongue in Powder River County sheep has been typed by USDA laboratories and shown to be international Type 17. It is accepted that this was probably the same type which caused the widespread outbreak in 1962 in Montana, Wyoming, and South Dakota. At that time the virus was collected and banked, and Type 17 was then identified in December 1975 from a Wyoming isolate. This work was done at the Onderstepoort Veterinary Research Institute, Republic of South Africa, which is the world reference center for Bluetongue virus. It now appears that a large endemic area of Type 17 exists in the Northern Great Plains continuous as far east as Kansas City. Although largely conjecture at this time, the problem area for this type may include the entire Missouri River drainage. Type 17 has not been shown to occur outside of this area.

Research has proven domestic cattle to be the long-term reservoir of this virus. Until newer information shows long-term survival of the virus in other species, the tendency will be to incriminate cattle as the source of virus to susceptible species. Sheep are not known to carry the virus for beyond fifty days after infection. Wild ruminants are considered dead-end hosts and at least white-tail deer and pronghorn antelope are not considered long-term carriers of virus, probably less so than sheep. Studies in this area of carriers should continue.

An important point and one that has long awaited clarification is that commercially available vaccines for use in sheep are probably of little value with Type 17. Therefore, it can hardly be recommended that we vaccinate sheep for Bluetongue with the vaccine available, unless it is to be applied to imported sheep where the Bluetongue Type is not yet determined.

There are known to be six types of the virus in the United States, seventeen types in the world. Vaccine protection requires type specificity in most instances. There is no vaccine recommended for use in cattle. The vaccine should never be used in pregnant ewes because of possible damage to the fetus.

Fortunately for us, the United States strains are not as virulent as those occurring in other parts of the world. Type 17 this last fall affected ten percent of the animals in an infected flock with less than one percent death loss. It does, however, increase needed vigilance against the possibility of a foreign virulent strain being introduced.

At this time it appears that the greatest contribution to the problem will be in increasing our understanding of this endemic area of the Type 17. We need to understand the relationship of susceptible species and gain the ability to know when to expect virus activity and clinical outbreaks.

### ANIMAL HEALTH DIVISION PROPOSES RULE CHANGES

The Board of Livestock will be reviewing Montana Administrative Code rules at their March 15 & 16 meeting in Helena that reflect updating in those rules pertaining to brucellosis and new rules on Equine Infectious Anemia.

Brucellosis rule changes as proposed would: (1) Require "Investment Cattle" herds, those owned by a person whose primary occupation is not the production of livestock and who has other persons managing his livestock production on premises not under his ownership to be brucellosis tested when sold (change of ownership) or when moved to non-contiguous premises, (2) Clarify the departments power to order a brucellosis test at a "change of ownership" or "change of premises" for investment cattle, (3) Remove need for negative test on eligible exhibition cattle and swine, and (4) Provide for waiver of "change-of-ownership" test where vaccinated cattle remain with the ranch and no other cattle have been added.

Also proposed for amendment was the brucellosis rule relating to handling of suspects in a non-quarantined herd. That amendment, relating to fee charges for re-testing of suspects has been abandoned in view of recently discovered legal restrictions against such charges.

The proposed new rules on Equine Infectious Anemia (Swamp Fever) (1) Sets out definitions of the terms used in the proposed rules, (2) shows requirement for adequate identification of the equine at time of bleeding for later identification if needed, and (3) requires branding of the EIA reactor (Coggins Test or other approved test positive) within 14 days with 2 inch hot iron brand 81A followed by other assigned numbers on either side of the neck. The branded reactor would not be permitted to be sold, given away or destroyed except on written permit from the Department of Livestock.

No quarantine provisions are related to in these proposals, no herds are required to be tested and shows, roping events or rodeos and fairs are not requested to implement test requirements. Such measures might be considered later if horse owners of the state so request.

At this writing, it is evident that the brucellosis rules may be adopted without a hearing for lack of response from interested parties. However, it is now certain that a public hearing will be scheduled for the proposed EIA rules in mid-May.

The Board will also be considering adoption of Montana Administrative Code rules for the Brands-Enforcement Division pertaining to Licensed Livestock Market Management hearings.

### DEPARTMENT STAFF PARTICIPATING IN "MUTILATION" MEETINGS

Staff members of both the Animal Health Division and the Brands-Enforcement Division have been attending meetings of law enforcement personnel of Montana to approach an understanding of the so-called "Mutilation" of animals. In that much public attention has been prompted by press releases supporting weird acts, it is important that more critical evaluation be made on the animal carcasses by people better informed to appraise the subject area.

At a meeting in Great Falls January 28, 1977, attended by peace officers from several counties, veterinarians and ranchers of the area and the press, our three Department of Livestock Diagnostic Laboratory Veterinarians put forth some very impressive facts contradicting "mutilation" judgements. After an emotional opening session, the diagnostic veterinarians exhibited hide sections and photo en-



largements to support the evidence of carnivorous animal and bird feeding as responsible for the absence of parts. Testimony from "mutilation" theorist's was found to be less and less credible. Drs. Hubbell, Quinn and Ford solicited the presentation of suspect cases to the Diagnostic Laboratory that brand inspectors, sheriff department officials or veterinarians might feel was an act of carcass mutilation by humans so that a proper evaluation might be made.

Since that meeting, some county officials have submitted carcasses to and visited the Diagnostic Laboratory. Already this effort by the diagnosticians is diminishing the field judgments of "mutilation".

As was suggested this month by a peace officer who had supported "mutilation" judgments, but was now impressed with the capability of diagnosticians, perhaps the participants of the Montana Law Enforcement Academy held as a training course on the Montana State University campus should include a tour of the laboratory and comments or lectures by staff members.

This new concept of communication to promote adequate judgment on fallen animals can prove to be of value to our livestock producers and dispell some of the anxiety that has been created with headlines built out of imagination and misunderstanding. And more importantly, maybe our Montana veterinarians will become more proficient in evaluating the absence of soft body parts and learn more about the attacks made by the very large numbers of carnivorous animals and birds that are present in this state as "mutilators".

#### LIVESTOCK DROUGHT DISASTER PLANS FORMULATED

Governor Thomas L. Judge requested in a letter of February 28, 1977 to all agencies of state government that measures be formulated to meet the threatening drought in Montana. He requested a report analyzing the negative impacts on programs and resources of those areas for which the department was responsible.

The Department of Livestock responded on the target date of March 7, 1977 with recommendations to use the services of the Montana Crop and Reporting Service which makes weekly compilation of agricultural information from County Extension Agents and others. Their Crop-Weather Questionnaire will be drafted for inquiry into estimates of soil moisture, stream flow, reservoir levels and stored roughage supplies on hand the first week of April, May and June. This information, as planned, will be added to other information procured in May from public lands administrators as to livestock turn-out time and use permitted of those grazing areas.

If drought is not alleviated by mid June, and conditions worsen it is recommended that emergency area designation be sought for impacted areas or the entire state. At that same point in timing, feed, range, slaughter and transportation conditions and resources would be evaluated. Outlets for quality dairy and beef cattle, sheep or swine seed stock would be sought or measures taken to provide supplement for those animals needed so basically for post-drought restocking. Local, state and federal agencies, including livestock producer representatives would take on respective duties in an extreme emergency for the management of programmed livestock purchase under such conditions. There would have to be veterinary inspection for evaluation of salvageable animals and adequate disposal of non-salvageable or shipping risk animals. Montana livestock credit agencies would also be involved.

In this response to Governor Judge and John C. Orth, Montana Coordinator For Drought in the Department of Natural Resources, The Department of Livestock made a plea for livestock industry representatives to be involved in all decisions as such guidance would be crucial to the success of livestock movement, salvage and post-drought restocking.

# SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR JANUARY 1977

The accessions handled during January, 1977 totaled 295. Accessions by specie were:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	155
Equine.....	22
Porcine.....	32
Ovine.....	1
Feline.....	12
Canine.....	26
Avian.....	2
Wildlife.....	9
Other.....	36
TOTAL.....	295

During January we had one rabid skunk submitted, no human exposure involved.

The laboratory staff has had problems in achieving what we consider to be a valid culturing procedure for Vibriosis and Trichomoniasis in the bull. Diagnostic measures applied to those specimens that are grossly contaminated, scanty in quantity or delayed in transit, make the staff uncertain when we achieve negative results.

We are offering a procedure which varies from the preputial wash method we have previously recommended. Included with this Monthly Letter is a copy of "Collection of Preputial Mucus For Vibriosis Examination" (page 17A) for insertion in your Department of Livestock loose leaf booklet "Montana Administrative Codes and Laboratory Reference Manual". Our laboratory will furnish on request transport media for both Vibriosis and Trichomoniasis culturing.

Veterinarians who might be involved in testing inter-continental bovine shipments should pay close attention to this booklet insertion.

## AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Cat.....	6
Cattle.....	12
Coyote.....	1
Dog.....	4
Fetus:	
Bovine.....	38
Sheep.....	2
Swine.....	2
Peacock.....	1
Sheep.....	1
Skunk.....	1
Swine.....	18
Turkey.....	1
TOTAL AUTOPSIES PERFORMED.....	87

## SEROLOGY REPORT

Page 5

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Cattle....	2	302	2	306
" ".....	Deer.....		1		1
Bluetongue CF.....	Bison.....		6		6
" ".....	Caprine...		1		1
* " ".....	Cattle....		269	1	270
" ".....	Deer.....		1		1
Bovine Virus Diarrhea (BVD) CF.....	Cattle....	5	66	14	85
Brucella abortus agglutination.....	Bison.....		6		6
" ".....	Cattle....	164	34,174	173	34,511
" " " (card - field & market) .....	" .....		131		131
" " " .....	Deer.....		1		1
" " " .....	Goat.....		15		15
" " " .....	Horse.....		2		2
" " " .....	Swine.....		60		60
" " " (card - field & market) .....	" .....		112		112
Brucellosis Ring Test.....	Cream.....		11		11
*Equine Infectious Anemia (AGID).....	Horse.....		253		253
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle....	4	63		67
Leptospira autumnalis MA.....	Caprine...		6		6
" " ".....	Cattle....	3	216		219
" " ".....	Human.....		2		2
" " ".....	Swine.....	8	15		23
Leptospira canicola MA.....	Caprine...		6		6
" " ".....	Cattle....		219		219
" " ".....	Human.....		2		2
" " ".....	Swine.....		23		23
Leptospira grippotyphosa MA.....	Caprine...		6		6
" " ".....	Cattle....	2	217		219
" " ".....	Human.....		2		2
" " ".....	Swine.....		23		23
Leptospira hardjo MA.....	Caprine...		6		6
" " ".....	Cattle....	4	215		219
" " ".....	Human.....		2		2
" " ".....	Swine.....		23		23

## SEROLOGY REPORT - (Continued)

Page 6

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira icterohemorrhagiae</u> MA.....	Caprine...		6		6
" " ".....	Cattle...	2	217		219
" " ".....	Human....		2		2
" " ".....	Swine....		23		23
<u>Leptospira pomona</u> MA.....	Caprine...		6		6
" " ".....	Cattle...	25	194		219
" " ".....	Human....		2		2
" " ".....	Swine....		23		23
<u>Leptospira tarassovi</u> MA.....	Caprine...		6		6
" " ".....	Cattle...		219		219
" " ".....	Human....		2		2
" " ".....	Swine....		23		23
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle...		39		39
Pseudorabies.....	Swine....		13		13
TOTAL SEROLOGICAL TESTS.....		219	37,232	190	37,641

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

97 Veterinarians Reporting

36 Counties Reporting

38 Diseases Reported

DISEASES AND SPECIESCATTLE:

## INDEX OF COUNTIES

	1	2	3	4	5	6	7	8	11	12	13	17	18	19	20
Abscess.....			1												
Actinobacillosis.....		13	46							2					
Actinomycosis.....	9		36												
Atrophic Rhinitis.....			1					1		3					
Bac. Hemoglobinuria..					1	1	1				1				
Black leg.....											1				
Bovine Respiratory Dis								1					157		
Bovine Virus Disease..								4					750		
Brisket Edema.....			1										1		
Cancer eye.....	5	6	42				2	3		2					5
Coccidiosis.....			62			14	15	37	59	58			100	2	120
Diphtheria.....															
Helminthiasis.....			3				15				6		2		1
Infectious Keratitis..			30												
Leptospirosis.....			6	2		3							3		
Pneumonia.....					3						2				
Pulmonary emphysema..															
Rhinotracheitis.....													30		
Shipping fever.....			200					1		30			21		
T.E.M.....								2							
Urolithiasis.....			17	6	3	1		25	12	5		3	63	7	4
Vibriosis.....															
Virus diarrhea.....											1	45			

SHEEP:

Enterotoxemia.....															
Foot-rot.....															
Mastitis.....			8												
Vibriosis.....								10							

SWINE:

Abscess.....			2												
Arthritis.....			2												
Enterotoxemia.....															
Erysipelas.....															8
Pseudorabies.....															

HORSES:

Influenza.....			2	3	2								5		
Rhinopneumonitis.....				2											
Strangles.....		12	2		1								13		1

DOGS:

Distemper.....		23	6	8	2	1	13			6		2	7		2
Infectious hepatitis..		9		1			1	1		2					
Leptospirosis.....				2											

DISEASES AND SPECIES

<u>CATTLE:</u>	INDEX OF COUNTIES														
	21	24	25	26	27	29	30	33	34	36	38	39	42	43	
Abscess.....															
Actinobacillosis.....												1			
Actinomycosis.....	2				12										
Atrophic Rhinitis.....															
Bac. Hemoglobinuria.....															
Black leg.....									1						
Bovine Respiratory Dis.....															
Bovine Virus Disease.....															
Brisket Edema.....															
Cancer eye .....	1				22										
Coccidiosis.....		60	100		350	39		60	110	15		25			
Diphtheria.....												1			
Helminthiasis.....		45				128		340				40			
Infectious Keratitis.....															
Leptosiprosis .....															
Pneumonia.....															
Pulmonary emphysema.....															
Rhinotracheitis.....		60			42			200							
Shipping fever.....		1		520						2					
T.E.M.....															
Urolithiasis.....		20	5		47	22		16	44	10	4	56	8	2	
Vibriosis.....			1												
Virus Diarrhea.....															
<u>SHEEP:</u>															
Enterotoxemia.....					4										
Foot-rot.....									1						
Mastitis .....															
Vibriosis.....															
<u>SWINE:</u>															
Abscess.....															
Arthritis.....															
Enterotoxemia .....		7													
Erysipelas.....					1							1			
Pseudrabies.....												12			
<u>HORSES:</u>															
Influenza.....													1		
Rhinopneumonitis.....															
Strangles.....					7	6			4						
<u>DOGS:</u>															
Distemper.....			1			6	7		1	2		5	1		
Infectious hepatitis.....					2										
Leptospirosis.....			5		1										

DISEASES AND SPECIESCATTLE:

	INDEX OF COUNTIES							TOTAL CASES	TOTAL HERDS
	44	46	47	49	51	52	56		
Abscess.....								1	1
Actinobacillosis.....								62	62
Actinomycosis.....								63	23
Atrophic Rhinitis.....								1	1
Bac. Hemoglobinuria.....								4	4
Black leg.....								2	2
Bovine Respiratory Dis.....								158	10
Bovine Virus Disease.....								754	7
Brisket Edema.....								2	2
Cancer eye.....				1				89	86
Coccidiosis.....	3							1229	94
Diphtheria.....								1	1
Helminthiasis.....							3	583	28
Infectious Keratitis.....								30	30
Leptospirosis.....				1				15	8
Pneumonia.....								5	4
Pulmonary emphysema.....	3							3	1
Rhinotracheitis.....								332	5
Shipping fever.....	40					17		832	116
T.E.M.....								2	2
Urolithiasis.....	45		12			6		443	254
Vibriosis.....								1	1
Virus Diarrhea.....								46	2
<u>SHEEP:</u>									
Enterotoxemia.....								4	2
Foot-rot.....								1	1
Mastitis.....								8	5
Vibriosis.....								10	1
<u>SWINE:</u>									
Abscess.....								2	2
Arthritis.....								2	1
Enterotoxemia.....								7	1
Erysipelas.....								10	3
Pseudorabies.....								12	1
<u>HORSES:</u>									
Influenza.....								13	8
Rhinopneumonitis.....								2	2
Strangles.....								46	23
<u>DOGS:</u>									
Distemper.....	1	3			2		7	106	97
Infectious hepatitis.....							16	32	9
Leptospirosis.....								8	8
TOTAL CASES AND HERDS.....								4921	908

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Chouteau	38.....	Glacier		



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STATE OF MONTANA

DEPARTMENT OF LIVESTOCK

ANIMAL HEALTH DIVISION

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MONTHLY LETTER

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ROBERT L. DESCHAMPS..... RONAN  
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FRED A. JOHNSTON..... GREAT FALLS  
VERNON V. KELLER..... FISHTAIL  
RALPH J. PARKER..... FORT SHAW  
ROBERT M. SIMONS..... TURNER

G. C. HALVER, D.V.M.

ADMINISTRATOR

&

STATE VETERINARIAN



STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - FEBRUARY, 1977

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NEW CHAIRMAN, MONTANA BOARD OF LIVESTOCK

During the meeting of the Board of Livestock January 25 and 26, 1977, Governor Thomas L. Judge announced the reappointment of Robert M. Simons of Turner and Robert G. Barthelmess of Miles City. The Governor selected Mr. Barthelmess to serve as Chairman of the Board succeeding Mr. Simons who had been Board Chairman since March, 1973.

In accepting the Chairmanship position, Mr. Barthelmess expressed appreciation to "Bob" Simons for the great amount of time and work expended by him for the Department of Livestock and the livestock industry of Montana. It was pointed out by Mr. Barthelmess that communication in all sectors of the department is the secret to the success of the Board and the staff in carrying out its responsibility to the livestock industry and public of Montana.

Barthelmess and Simons represent beef cattle producers. The other five members of the Board of Livestock are Fred Johnston, Augusta and Robert Deschamps, Jr., Ronan representing beef cattle producers, Eugene Donaldson, Helena, swine producers, Vernon Keller, Fishtail, sheep producers and Ralph Parker, Fort Shaw, the dairy producers.

SECOND PSUEDORABIES SWINE HERD

In the short time frame of 40 days, psuedorabies was diagnosed January 26, 1977 in a second Montana swine herd. This herd was in Fallon County within a few miles of the eastern border of the state, in contrast to the December diagnosed herd in Ravalli County very close to the western border. The virus was isolated from baby pig tissues.

At the request of the Montana Pork Producers, the Board of Livestock has reviewed proposed rules requiring that breeding swine entering Montana be negative to the serum neutralization test and originate from herds not known to have symptoms of the disease in the past 12 months. This rule change on imported breeding swine as proposed will receive public review in accordance with the Montana Procedures Act for acceptance into the Montana Administrative Code rules of the Department.

KILLED BVD VACCINE FOR COWS

An experimental vaccine for bovine viral diarrhea (BVD) developed by USDA was recently announced at Ames, Iowa. This vaccine is considered to have two advantages over vaccines now available to cattlemen. It is safe to use on pregnant cows and it does not produce post-vaccinal reactions.

The inactivated vaccine protected both pregnant cows and their unborn calves from BVD infection in tests at the National Animal Disease Center. Dr. Arian W. McClurkin says it thus may fill the need for a safe BVD vaccine for use in beef and dairy cow-calf operations where cows may be in all stages of pregnancy.

No date is given as to when this vaccine may be on the market; we in Montana hope it will be not long delayed.

#### NEW DEPUTY STATE VETERINARIANS

The following veterinarians received deputy appointments on February 2, 1977:

MAC DONALD, BRUCE G..... Great Falls  
CLARK, C. HARDEE..... Havre  
O'DEA, PATRICK P..... Kalispell

SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR DECEMBER 1976

The accessions handled during December, 1976 totaled 288. Accessions by specie were:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	181
Equine.....	24
Porcine.....	11
Ovine.....	2
Feline.....	13
Canine.....	18
Avian.....	6
Wildlife.....	13
Other.....	20
TOTAL.....	288

It is interesting to note that in spite of what certainly must be regarded as a depressed cattle market, the laboratory handled over 500 more accessions during the last four months of 1976, than during the last four months of 1975. This probably reflects an increase in submissions from the small animal practioners.

Two positive rabies findings were made in December, both in wildlife species and neither involving human exposure.

AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Beaver.....	1
Cat.....	7
Cattle.....	6
Chicken.....	7
Coyote.....	1
Deer.....	2
Dog.....	4
Fetus:	
Bovine.....	9
Porcine.....	1
Horse.....	1
Mink.....	1
Muskrat.....	1
Parrot.....	1
Quail.....	1
Raccoon.....	1
Skunk.....	3
Swine.....	2
Weasel.....	2
TOTAL AUTOPSIES PERFORMED.....	51

## SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Bison.....		2		2
" ".....	Cattle.....	17	580	5	602
" ".....	Elk.....		12		12
Bluetongue CF.....	Bison.....		2		2
* " ".....	Cattle.....	6	1,027	5	1,038
" ".....	Elk.....		10		10
Bovine Virus Diarrhea (BVD) CF.....	Cattle.....	2	89		91
Brucella abortus agglutination.....	Bison.....		41		41
* " " " " (card-field & market).....	Cattle.....	118	47,821	227	48,166
" " " ".....	" ".....		2		2
" " " ".....	Elk.....		28		28
" " " ".....	Horse.....		1		1
" " " ".....	Swine.....		67	1	68
Brucellosis Ring Test.....	Cream.....		102	1	103
*Equine Infectious Anemia (AGID).....	Horse.....	1	205		206
Leptospira autumnalis MA.....	Cattle.....	6	267		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse.....	1	2		3
" " " ".....	Human.....		4		4
" " " ".....	Swine.....		3		3
Leptospira canicola MA.....	Cattle.....		273		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse.....		3		3
" " " ".....	Human.....		4		4
" " " ".....	Swine.....		3		3
Leptospira grippotyphosa MA.....	Cattle.....	2	271		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse.....		3		3
" " " ".....	Human.....		4		4
" " " ".....	Swine.....		3		3
Leptospira hardjo MA.....	Cattle.....	8	265		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse.....		3		3
" " " ".....	Human.....		4		4
" " " ".....	Swine.....		3		3

## SEROLOGY REPORT - (Continued)

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira icterohemorrhagia</u> MA.....	Cattle....	2	271		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse....	1	2		3
" " " ".....	Human....		4		4
" " " ".....	Swine....		3		3
<u>Leptospira pomona</u> MA.....	Cattle....	23	250		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse....	1	2		3
" " " ".....	Human....		4		4
" " " ".....	Swine....		3		3
<u>Leptospira tarassovi</u> MA.....	Cattle....		273		273
" " " ".....	Elk.....		15		15
" " " ".....	Horse....		3		3
" " " ".....	Human....		4		4
" " " ".....	Swine....		3		3
Parainfluenza (PI ) HA.....	Cattle....	2	71		73
TOTAL SEROLOGICAL TESTS.....		190	52,100	239	52,529

\*Test results reported from the Diagnostic Laboratory, Bozeman, other Montana laboratories and various out-of-state laboratories.

MONTANA VETERINARIANS' ANIMAL DISEASE REPORT  
DECEMBER, 1976

86 Veterinarians Reporting

44 Counties Reporting

31 Diseases Reported

DISEASES AND SPECIES

CATTLE:

DISEASE	INDEX OF COUNTIES															
	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	
Actinobacillosis.....		12	103					1							2	
Actinomycosis.....	4		158					1				2			1	
Bacillary hemo- globinuria.....													2	9		
Blackleg.....							1							1		
Cancer eye.....	4	9	105				2	5				3			5	
Coccidiosis.....		4	30	3	3		84	10		15	400	40		17		
Helminthiasis.....			8									300	125			
Infectious keratitis..			44													
Leptospirosis.....			10													
Lungworm.....							1									
Necrobacillosis.....																
Pulmonary emphysema...																
Rhinotracheitis.....		72					450		300		450	45				
Shipping fever.....	10	27	308	100	27			7		40	100	177	50	4		
TEME.....																
Urolithiasis.....	1	11	87	2	15	6	1	41		13	70	20				
Vibriosis.....																
Virus diarrhea.....														3		

SHEEP:

Arthritis.....			2												
Mastitis.....			6												
REO.....															
Vibriosis.....															

SWINE:

Arthritis.....			2												
Erysipelas.....												3			
Leptospirosis.....							150						3		
Poison: Salt.....												12			

HORSES:

Distemper.....	10		6				3								
Encephalomyelitis....			1												
Infectious keratitis..															
Infectious rhino- pneumonitis.....				8											
Influenza.....					3							21	3		
Leptospirosis.....															
Strangles.....		5				5				20			3		

DOGS:

Distemper.....	10	29	1	12	2		11					16	3		
Infectious hepatitis..		1					1						1		
Leptospirosis.....		2		1											

POULTRY:

Tuberculosis.....															
-------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



## DISEASES AND SPECIES

INDEX OF COUNTIES													
CATTLE:	17	18	19	20	21	23	24	25	27	28	29	30	31
Actinobacillosis.....					2								
Actinomycosis.....				1									
Bacillary hemo- globinuria.....								1					
Blackleg.....						3							
Cancer eye.....		15		3	4								
Coccidiosis.....	15	204				1	40		130	50	2	15	
Helminthiasis.....							40			4			
Infectious keratitis..													
Leptospirosis.....													
Lungworm.....													
Necrobacillosis.....													
Pulmonary emphysema...							1						
Rhinotracheitis.....									44				
Shipping fever.....		3					10	2	50				36
TEME.....													
Urolithiasis.....		20	6				33	6	112	12	16		11
Vibriosis.....	40												
Virus diarrhea.....										3			
SHEEP:													
Arthritis.....													
Mastitis.....													
REO.....													
Vibriosis.....						1							
SWINE:													
Arthritis.....													
Erysipelas.....									10				
Leptospirosis.....													
Poison: <u>Salt</u> .....													
HORSES:													
Distemper.....									1				
Encephalomyelitis.....													
Infectious keratitis..													
Infectious rhino- pneumonitis.....													
Influenza.....													
Leptospirosis.....									3				
Strangles.....									8				
DOGS:													
Distemper.....		3								12		6	
Infectious hepatitis..													
Leptospirosis.....													
POULTRY:													
Tuberculosis.....													

## DISEASES AND SPECIES

	INDEX OF COUNTIES												
	34	35	36	37	38	39	42	43	44	47	49	51	52
CATTLE:													
Actinobacillosis.....				1									
Actinomycosis.....													
Bacillary hemo- globinuria.....									1		2		
Blackleg.....													
Cancer eye.....				2									
Coccidiosis.....				97	150	9	2		10			2	10
Helminthiasis.....			8			3							
Infectious keratitis..													
Leptospirosis.....					12								
Lungworm.....													
Necrobacillosis.....								1					
Pulmonary emphysema...			25		12								
Rhinotracheitis.....		300		12	32			20			3	20	1
Shipping fever.....			150		25		200	20	500	500		15	102
TEME.....													6
Urolithiasis.....	6			5	5	35	29	1	15				31
Vibriosis.....					30							1	
Virus diarrhea.....				5	29	2							1
SHEEP:													
Arthritis.....													
Mastitis.....													
REO.....							3						
Vibriosis.....													
SWINE:													
Arthritis.....													
Erysipelas.....													
Leptospirosis.....													
Poison: Salt.....													
HORSES:													
Distemper.....													
Encephalomyelitis...													
Infectious keratitis..										100			
Infectious rhino- pneumonitis.....													
Influenza.....												1	
Leptospirosis.....													
Strangles.....	1	6		1		1							
DOGS:													
Distemper.....				1	6	5							
Infectious hepatitis..													
Leptospirosis.....													
POULTRY:													
Tuberculosis.....							1						

## DISEASES AND SPECIES

	INDEX OF COUNTIES			TOTAL CASES	TOTAL HERDS
	53	54	55		
<b>CATTLE:</b>					
Actinobacillosis.....				121	119
Actinomycosis.....				167	167
Bacillary hemo- globinuria.....				15	9
Blackleg.....				5	4
Cancer eye.....				157	148
Coccidiosis.....	1			1344	95
Helminthiasis.....				488	32
Infectious keratitis..				44	44
Leptospirosis.....				22	3
Lungworm.....				1	1
Necrobacillosis.....				1	1
Pulmonary emphysema..				38	8
Rhinotracheitis.....				1749	20
Shipping fever.....				2463	140
TEME.....			6	6	1
Urolithiasis.....				610	408
Vibriosis.....				71	4
Virus diarrhea.....		3		47	9
<b>SHEEP:</b>					
Arthritis.....				2	1
Mastitis.....				6	3
REO.....				3	1
Vibriosis.....				1	1
<b>SWINE:</b>					
Arthritis.....				2	1
Erysipelas.....				13	2
Leptospirosis.....				153	2
Poison: Salt.....				12	1
<b>HORSES:</b>					
Distemper.....				20	20
Encephalomyelitis....				1	1
Infectious keratitis..				100	1
Infectious rhino- pneumonitis.....				8	8
Influenza.....				28	22
Leptospirosis.....				3	3
Strangles.....				50	19
<b>DOGS:</b>					
Distemper.....				117	111
Infectious hepatitis..				3	3
Leptospirosis.....				3	3
<b>POULTRY:</b>					
Tuberculosis.....				1	1
<b>TOTAL CASES AND HERDS.....</b>				<b>7875</b>	<b>1417</b>

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Chouteau	38.....	Glacier		



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DEPARTMENT OF LIVESTOCK

ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

MONTHLY LETTER

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AND  
STATE VETERINARIAN





STATE OF MONTANA  
DEPARTMENT OF LIVESTOCK  
Animal Health Division  
Helena, Montana 59601

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MONTHLY LETTER - JANUARY, 1977

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PSUEDORABIES DIAGNOSED IN MONTANA SWINE

A herd of swine in Ravalli County became suspicious for psuedorabies because of a few baby pig losses. The practitioner attending the herd submitted one of five dead piglets to our Diagnostic Laboratory at Bozeman on December 3, 1976. Laboratory pathologists became suspicious of psuedorabies. The specimens were forwarded to the National Animal Disease Laboratory, and positive fluorescent antibody cell-culture findings were reported to Montana on December 16, 1976. As this is the initial diagnosis of this disease in Montana an in-depth epidemiological study is being pursued.

The herd with the disease is one to which numerous feeder pigs and breeding animals have been added. Only six (6) piglets have been observed as apparent cases. This permits broad speculation as to when and from where the disease might have been introduced.

Psuedorabies, also called Aujeszky's disease must now be considered to be a reportable disease in the state. Rules for management of this disease will now have to be promulgated. Experience with the disease in other states supports the need for careful evaluation of the problem to avoid spread to other premises and animals and serious economic loss to swine producers.

BRUCELLOSIS UPDATE

Montana closed the year with the least number of brucellosis quarantined herds since March 1975. At that time, 34 herds were quarantined compared to 37 on January 1, 1977. There has been a consistent and steady decline in the number of herds since August 1976 when 63 herds were reported. Much of this decline can be attributed to three factors:

- (1) The change of ownership rule requiring a brucellosis test on all non-slaughter class cattle sold in Montana.
- (2) The import rule requiring a 30-60 day retest of cows imported from states or provinces where brucellosis infection still exists, and
- (3) Increased laboratory capability for the isolation and typing of *Brucella* at the Diagnostic Laboratory in Bozeman.

The change of ownership rule went into effect on November 4, 1975. During the period November 1975 through December 1976, 189,642 cattle (10,140 lots) were tested by Montana veterinarians. Of the total cattle tested, 53 percent were tested in the country at the herd of origin. Ninety (90) reactors were detected in 39 lots of cattle. An increase of over 6,000 cattle tested occurred in the period November-December 1976 since 49,393 cattle (1,885 lots) were tested in that period compared to 43,318 cattle (1,567 lots) tested in the last two months

of 1975. More important are the number of lots in which reactors were detected in the same time period. Again, the decrease in the number of infected lots and reactors occurred in 1976 with five lots with six reactors compared to nine lots with eleven reactors in 1975. It is impossible to quantify the number of herds that were protected from infection with the discovery of the 39 infected lots, however, in one dispersion sale of an unknown infected Montana herd in 1973, 13 of the 18 herds in which animals were consigned became infected with brucellosis.

The import rule has proven to be a valuable tool in preventing secondary spread of the disease. In 14 months, of 477 import consignments, reactors or suspects were detected in five consignments upon retest. This retest provision prevented the unnecessary testing of several native herds and avoided secondary spread of the infection into clean Montana cattle.

The most significant progress achieved in the brucellosis program within the past year, has been the improvement in the cultural study phase of the program. In August additional training and utilization of additional equipment and techniques to increase the efficiency of isolating the brucella organism was initiated at the Diagnostic Laboratory in Bozeman. The laboratory now has the capability of isolating and typing brucella organisms within a maximum of two weeks. Prior to August the laboratory mainly was a screening laboratory in that it isolated various organisms and provisionally identified them as brucella species. These isolates and any tissues which were negative on culture at Bozeman had to be referred to the Brucellosis Reference Laboratory at the National Animal Disease Center in Ames, Iowa. Therefore, prior to August, a range of 60 to 150 days were required for final cultural reports on the reactors and suspects sent to slaughter. The culture information coupled with clinical, epidemiologic, and serologic histories determine the status of any quarantined herd. Therefore, it is now possible to reduce the duration of quarantine for these herds where over-age vaccination has occurred from seven months to a maximum of two months.

CURRENT STATUS OF THE CALF SCOURS VACCINE  
AT THE MONTANA VETERINARY RESEARCH LABORATORY  
Lyle Myers, Ph.D., Bozeman

A significant portion of the calf scours problem in Montana is caused by E. coli. We have found that 6 different strains of enteropathogenic E. coli cause scours in Montana and other states. An E. coli bacterin containing these 6 strains was developed and tested against naturally occurring cases of scours during the 1975 and 1976 calving seasons. The bacterin was found to significantly reduce losses due to scours especially in some herds with an acute scour problem in calves under 2 weeks of age. Ft. Dodge Laboratories is presently evaluating this bacterin for safety and efficacy and hopes to have it commercially available in 1978. When and if the E. coli bacterin becomes available, one should remember that its use is not indicated in herds with a scour problem caused by an agent other than E. coli. Hence, the need for definitive diagnostic work is apparent. The VRL does not plan to conduct a field trial during 1977 in Montana as was done during 1975 and 1976 but instead will cooperate where possible with Ft. Dodge in their evaluation of the product. As before, we are encouraging people to submit fecal specimens taken from untreated scouring calves to the laboratory for possible detection of enteropathogenic E. coli.

## REPORT OF STATE VETERINARIAN TO MONTANA VETERINARY MEDICAL ASSOCIATION

In a report January 15, 1977 to the Montana Veterinary Medical Association, the State Veterinarian made these remarks:

The responsibilities imposed upon the Department of Livestock and other state agencies in these days are great. The problems of responding to environmental laws, labor doctrines, fiscal responsibility and personnel management require a whole section of specialists that are quite unfamiliar with brand inspection and animal disease control. This cost of doing inter-governmental agency business today is a considerable sum of money and is threatening to disrupt - yes, even exhaust - the earmarked revenue funding that has been sound for our basic Departmental responsibilities of livestock disease, theft, and predator control. At this time we have a very real problem with budget people trying to make general fund monies support this added "bureaucratic cost" thrust upon us by legislative action of the last few years. We hope we can maintain our historically good reputation with the appropriation committees for managing programs and monies in an astute manner. We may need help from all sources during this 1977 Legislative session on budgets and funding.

In 1976 we have had no serious new disease problems in Montana food-animals. Bluetongue reappeared in Powder River sheep in September, curtailing sheep exports to Canada. Psuedorabies was diagnosed in one herd of swine in December in Ravalli County, the first that we know to be found in Montana. Equine Infectious Anemia continues to be somewhat frustrating to some owners and to their neighbors but as a horse disease, probably it is of no more importance statewide now than during any other year since its introduction before the turn of the century.

In the scope of new rules for the management of infectious diseases, you are aware of the import rule changes, mainly for cattle and horses, that became effective in May 1976, and the brucellosis rule changes of 1975. We are now in the process of promulgating some rule modifications and some simple new rules for Board of Livestock consideration. They include (1) waiving brucellosis tests imposed on Montana cattle for exhibition, (2) identification of Coggins test reactors with the hot brand 81A on the neck, (3) define the seller as responsible party in change-of-ownership brucellosis testing and (4) retest of brucellosis suspects in nonreactor herds to be done at owners expense. We have already announced the reduced fee charge for the Coggins test at the diagnostic laboratory. The elimination of the accession charge of \$4.00 will reduce the fee to a standard \$6.00 on Montana horses and \$12.00 on non-resident horses. This was not done for reasons of increasing patronage of our laboratory. I do hope however that more veterinarians will see fit to submit their equine bloods to Bozeman. When and if we have requirements for branding Coggins test reactors, the delays associated with results from non-resident labs may create serious embarrassment; we simply are not informed of reactors on a good time schedule by some out-of-state laboratories.

There have been seven (7) licensed veterinary technicians given special appointments to do official brucellosis vaccination and two (2) have presale market inspection appointments. I think we are proceeding with ample caution to avoid malpractice and misconduct but only time will tell.

We are presently making investigations of deputized veterinarians in three different areas based on reports that our health certificates were issued on animals not inspected.

In attempting to keep our Montana veterinarians well informed, we have mailed out the combined Montana Administrative Code Rules and Laboratory Handbook for insertion into a standard-sized notebook similar to that used for interstate regulations. I sincerely hope these Rules and the Handbook will be used and will prove helpful to you deputized veterinarians. The answers to most of your questions are in that booklet. Keep it handy and use it, please. As we are doing with "For Your Information" releases on interstate regulation changes, we will be including appropriate page inserts to cover changes in health rules, lab fees, or departmental Montana Administrative Code rule changes.

#### DR. BISBEE DIES SUDDENLY

We regret the passing of David N. Bisbee, 37, Kansas State University '68 of Vaughn. He had been affiliated with the A & B Veterinary Service since 1971. Our sympathies are extended to his wife and their three children of the home.

#### NEW DEPUTY STATE VETERINARIANS

The following new Deputy State Veterinarians have been appointed:

ARTHUR E. OTTO, D.V.M..... Kalispell  
GARY W. CHURCH, D.V.M..... Helena

# SUMMARY OF THE DIAGNOSTIC LABORATORY REPORT FOR NOVEMBER 1976

A total of 281 accessions were processed during the month of November, 1976. This compares with 218 accessions processed during the same period of time in 1975.

A breakdown of accessions by species follows:

<u>SPECIES</u>	<u>TOTAL</u>
Bovine.....	131
Equine.....	48
Porcine.....	10
Ovine.....	4
Feline.....	23
Canine.....	27
Avian.....	7
Wildlife.....	15
Other.....	16
TOTAL.....	281

Of the 281 accessions submitted to the Laboratory, 204 or 73 per cent were reported out with a laboratory diagnosis. Of the many attempts to isolate Brucella abortus, during November, B. abortus Type I (not strain 19) was isolated in eight instances.

In November there were 30 accessions processed for possible rabies infection. This total included both human exposure and non-human exposure. None of the specimens proved to be positive for rabies.

The AGID (coggins) test was done on 253 equine serum specimens during November. Eleven of these proved positive for Equine Infectious Anemia.

## AUTOPSIES PERFORMED REPORT

<u>SPECIES</u>	<u>NUMBER</u>
Bat.....	1
Cat.....	5
Cattle.....	12
Chicken.....	7
Dog.....	5
Fetus:	
Bovine.....	2
Mink.....	1
Mouse.....	1
Muskrat.....	1
Raccoon.....	1
Skunk.....	1
Swine.....	6
TOTAL AUTOPSIES PERFORMED.....	43

## SEROLOGY REPORT

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Anaplasma CF.....	Bison.....		12		12
" ".....	Cattle.....	12	451		463
Bluetongue CF.....	Bison.....		12		12
" ".....	Cattle.....		221		221
Bovine Virus Diarrhea (BVD) CF.....	Cattle.....	10	62		72
Brucella abortus agglutination.....	Bison.....	4	79	2	85
" " ".....	Canine.....		1		1
" " ".....	Cattle.....	95	50,189	144	50,428
" " ".....	".....		2		2
" " ".....	".....		4		4
" " ".....	Elk.....	6	13		19
" " ".....	Goat.....		3		3
" " ".....	Horse.....		1		1
" " ".....	Swine.....		80		80
Brucellosis Ring Test.....	Cream.....		55		55
Equine Encephalomyelitis - Eastern.....	Horse.....		1		1
" " - Venezuelan.....	".....		1		1
" " - Western.....	".....		1		1
*Equine Infectious Anemia (AGID).....	".....	11	348		359
Infectious Bovine Rhinotracheitis (IBR) CF.....	Cattle.....	4	60		64
Leptospira autumnalis MA.....	Bison.....		12		12
" " ".....	Canine.....		1		1
" " ".....	Caprine.....		2		2
" " ".....	Cattle.....	3	242		245
" " ".....	Elk.....		1		1
" " ".....	Horse.....		2		2
" " ".....	Human.....		1		1
" " ".....	Swine.....	2	14		16
Leptospira canicola MA.....	Bison.....		12		12
" " ".....	Canine.....		1		1
" " ".....	Caprine.....		2		2
" " ".....	Cattle.....		245		245
" " ".....	Elk.....		1		1
" " ".....	Horse.....		2		2
" " ".....	Human.....		1		1
" " ".....	Swine.....		16		16



## SEROLOGY REPORT - (Continued)

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
<u>Leptospira grippotyphosa</u> MA.....	Bison.....		12		12
" " " ".....	Canine....		1		1
" " " ".....	Caprine....		2		2
" " " ".....	Cattle....	1	244		245
" " " ".....	Elk.....		1		1
" " " ".....	Horse.....		2		2
" " " ".....	Human.....		1		1
" " " ".....	Swine.....		16		16
<u>Leptospira hardjo</u> MA.....	Bison.....		12		12
" " " ".....	Canine....		1		1
" " " ".....	Caprine....		2		2
" " " ".....	Cattle....	7	238		245
" " " ".....	Elk.....		1		1
" " " ".....	Horse.....		2		2
" " " ".....	Human.....		1		1
" " " ".....	Swine.....		16		16
<u>Leptospira icterohemorrhagia</u> MA.....	Bison.....		12		12
" " " ".....	Canine....		1		1
" " " ".....	Caprine....		2		2
" " " ".....	Cattle....	3	242		245
" " " ".....	Elk.....		1		1
" " " ".....	Horse.....	1	1		2
" " " ".....	Human.....		1		1
" " " ".....	Swine.....	9	7		16
<u>Leptospira pomona</u> MA.....	Bison.....		12		12
" " " ".....	Canine....		1		1
" " " ".....	Caprine....		2		2
" " " ".....	Cattle....	23	222		245
" " " ".....	Elk.....		1		1
" " " ".....	Horse.....		2		2
" " " ".....	Human.....		1		1
" " " ".....	Swine.....		16		16

TEST	SPECIES	POSITIVE	NEGATIVE	SUSPICIOUS	TOTAL
Leptospira tarassovi MA.....	Bison.....		12		12
" " ".....	Canine....		1		1
" " ".....	Caprine...		2		2
" " ".....	Cattle....		245		245
" " ".....	Elk.....		1		1
" " ".....	Horse.....		2		2
" " ".....	Human.....		1		1
" " ".....	Swine.....		16		16
Parainfluenza <sub>3</sub> (PI <sub>3</sub> ) HA.....	Cattle....	8	26		34
TOTAL SEROLOGICAL TESTS.....		199	53,533	146	53,878

\*Test results reported from the Diagnostic Laboratory, Bozeman and various out-of-state laboratories.



MONTANA VETERINARIANS' ANIMAL DISEASE REPORT  
NOVEMBER, 1976

76 Veterinarians Reporting..... 42 Counties Reporting..... 31 Diseases Reported

DISEASES AND SPECIES

INDEX OF COUNTIES																	
CATTLE:	1	2	3	4	5	6	7	8	11	12	13	14	15	16	17		
Actinobacillosis.....	4	12	2											10			
Actinomycosis.....				3			2	3		2				6			
Anaplasmosis.....						2											
Bacillary hemo- globinuria.....			1		1	1							3				
Blackleg.....											1						
Cancer eye.....	19	5	2				7	10		3	3			13			
Clostridium sordellii..																	
Clostridial toxemia...				3													
Coccidiosis.....			6		1	6					1		1				
Helminthiasis.....			1														
Infectious keratitis..								1									
Leptospirosis.....			5														
Pulmonary emphysema...					1												
Rhinotracheitis.....			30		5	5											
Shipping fever.....		50	315		50	155		69	75		15		3				
Urolithiasis.....		1	25		2			10	15			8				2	
Vibriosis.....																	
Virus diarrhea.....				2		8			300				2				
SHEEP:																	
Contagious ecthyma....																	
Mastitis.....			3														
REO.....																	
White muscle disease..																	
SWINE:																	
Arthritis.....			2														
Atrophic rhinitis....																	
Erysipelas.....				1													
Leptospirosis.....											3						
Pseudorabies.....																	
Swine dysentery.....																	
HORSES:																	
Encephalomyelitis....			1														
Infectious anemia....						21											
Influenza.....			8	6	5						2						
Strangles.....		1	7	4	2	3		1			1						
DOGS:																	
Distemper.....	6	31	9	12	2	3	8										
Infectious hepatitis..			1				3										
Leptospirosis.....						3											

DISEASES AND SPECIESCATTLE:

	18	19	20	21	22	24	25	26	27	29	30	31	33	36
Actinobacillosis.....														
Actinomycosis.....			1											
Anaplasmosis.....		25			3									
Bacillary hemo- globinuria.....	1													
Blackleg.....														
Cancer eye.....			4											
Clostridial toxemia...														
Coccidiosis.....		3	4							16				
Helminthiasis.....			45							25				
Infectious keratitis..														
Leptospirosis.....	1													
Pulmonary emphysema...						3		2		4				13
Rhinotracheitis.....														
Shipping fever.....	76				26	15			10					23
Urolithiasis.....	10	2	11		12	15	2		3	40			30	3
Vibriosis.....								12						
Virus diarrhea.....	6			118				117						

SHEEP:

Contagious ecthyma....				5											
Mastitis.....															
REO.....				5								5			
White muscle disease..															

SWINE:

Arthritis.....															
Atrophic rhinitis....															
Erysipelas.....															
Leptospirosis.....															
Pseudorabies.....															
Swine dysentery.....															

HORSES:

Encephalomyelitis....															
Infectious anemia.....															
Influenza.....	10							1							
Strangles.....	10				5					10					

DOGS:

Distemper.....	2		1		6			3	2	6	6				
Infectious hepatitis..															
Leptospirosis.....									3						

DISEASES AND SPECIESCATTLE:INDEX OF COUNTIES

	37	38	39	40	41	42	43	47	48	51	52	55	56
Actinobacillosis.....													
Actinomyces.....													
Anaplasmosis.....													
Bacillary hemo- globinuria.....										1			
Blackleg.....													
Cancer eye.....			2									1	
Clostridial toxemia...			4									8	
Coccidiosis.....	3		2										
Helminthiasis.....			2										
Infectious keratitis..													
Leptospirosis.....													
Pulmonary emphysema...						10		2		2			
Rhinotracheitis.....										2			
Shipping fever.....				200		200	4			2	12	5	
Urolithiasis.....	5		8			19	1	3		6	7		
Vibriosis.....										30			
Virus diarrhea.....		118	1		5								

SHEEP:

Contagious ecthyma....													
Mastitis.....													
REO.....													
White muscle disease..						40							

SWINE:

Arthritis.....													
Atrophic rhinitis....													
Erysipelas.....						2							
Leptospirosis.....													
Pseudorabies.....			1										
Swine dysentery.....	1		40										

HORSES:

Encephalomyelitis....													
Infectious anemia.....													
Influenza.....										1			
Strangles.....	1	2	1										

DOGS:

Distemper.....			1						2				2
Infectious hepatitis..													
Leptospirosis.....													

DISEASES AND SPECIES

<u>CATTLE:</u>	<u>TOTAL CASES</u>	<u>TOTAL HERDS</u>
Actinobacillosis.....	28	28
Actinomycosis.....	26	21
Anaplasmosis.....	30	4
Bacillary hemo- globinuria.....	8	8
Blackleg.....	1	1
Cancer eye.....	69	69
Clostridial toxemia...	3	3
Coccidiosis.....	43	25
Helminthiasis.....	73	26
Infectious keratitis..	1	1
Leptospirosis.....	6	4
Pulmonary emphysema...	37	13
Rhinotracheitis.....	42	8
Shipping fever.....	1305	91
Urolithiasis.....	240	159
Vibriosis.....	42	2
Virus diarrhea.....	677	20
<u>SHEEP:</u>		
Contagious ecthyma....	5	1
Mastitis.....	3	2
REO.....	10	2
White muscle disease..	40	1
<u>SWINE:</u>		
Arthritis.....	2	1
Atrophic rhinitis.....	0	0
Erysipelas.....	3	2
Leptospirosis.....	3	1
Pseudorabies.....	1	1
Swine dysentery.....	41	2
<u>HORSES:</u>		
Encephalomyelitis.....	1	1
Infectious anemia.....	21	2
Influenza.....	33	23
Strangles.....	48	28
<u>DOGS:</u>		
Distemper.....	102	100
Infectious hepatitis..	4	3
Leptospirosis.....	6	6
<u>TOTAL CASES AND HERDS....</u>	<u>2,953</u>	<u>69</u>

Montana Veterinarian's Animal Disease Report - Continued

INDEX OF COUNTIES

NO.	COUNTY	NO.	COUNTY	NO.	COUNTY
1.....	Silver Bow	20.....	Valley	39.....	Fallon
2.....	Cascade	21.....	Toole	40.....	Sweet Grass
3.....	Yellowstone	22.....	Big Horn	41.....	McCone
4.....	Missoula	23.....	Musselshell	42.....	Carter
5.....	Lewis & Clark	24.....	Blaine	43.....	Broadwater
6.....	Gallatin	25.....	Madison	44.....	Wheatland
7.....	Flathead	26.....	Pondera	45.....	Prairie
8.....	Fergus	27.....	Richland	46.....	Granite
9.....	Powder River	28.....	Powell	47.....	Meagher
10.....	Carbon	29.....	Rosebud	48.....	Liberty
11.....	Phillips	30.....	Deer Lodge	49.....	Park
12.....	Hill	31.....	Teton	50.....	Garfield
13.....	Ravalli	32.....	Stillwater	51.....	Jefferson
14.....	Custer	33.....	Treasure	52.....	Wibaux
15.....	Lake	34.....	Sheridan	53.....	Golden Valley
16.....	Dawson	35.....	Sanders	54.....	Mineral
17.....	Roosevelt	36.....	Judith Basin	55.....	Petroleum
18.....	Beaverhead	37.....	Daniels	56.....	Lincoln
19.....	Chouteau	38.....	Glacier		

